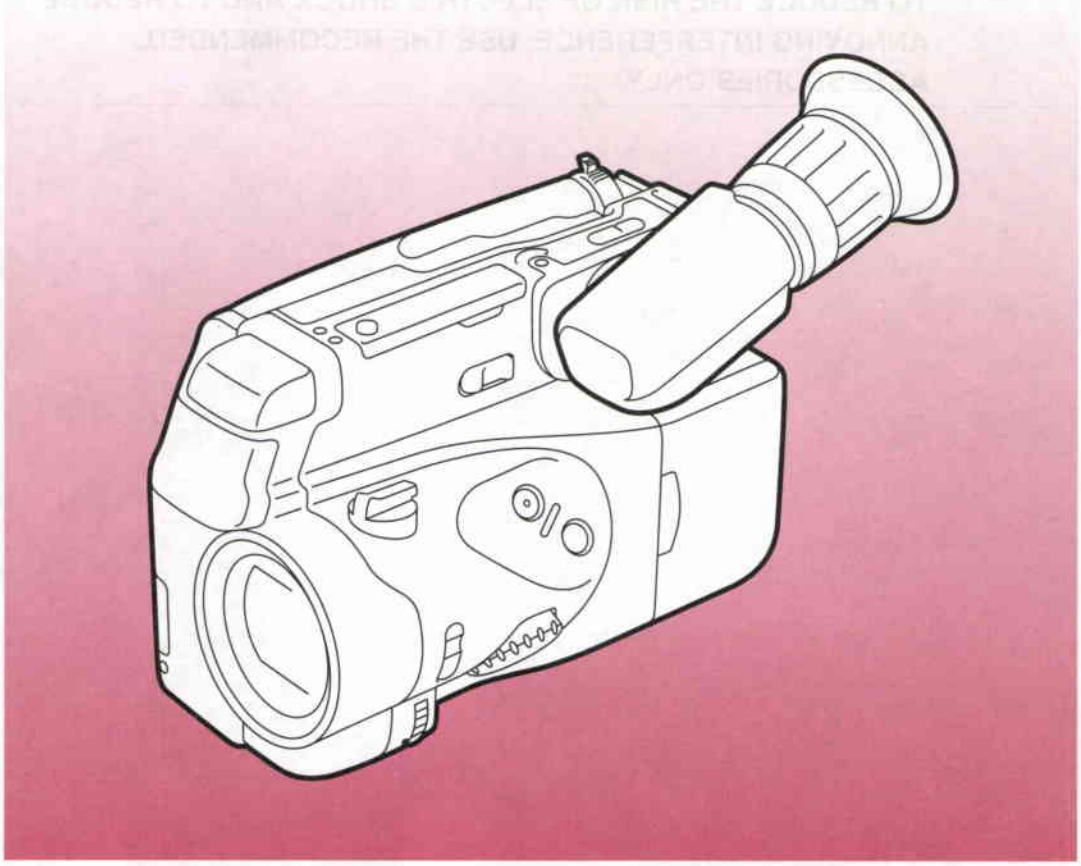
C3/20-7

8mm VIDEO CAMCORDER

Instruction Manual



8

Canon

UC600

Important Usage Instructions

CAUTION:

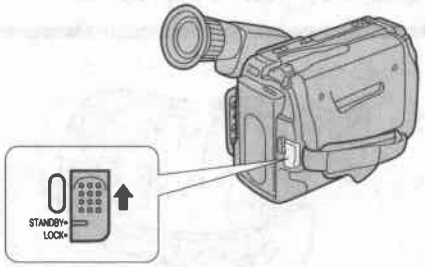
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

WARNING:

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

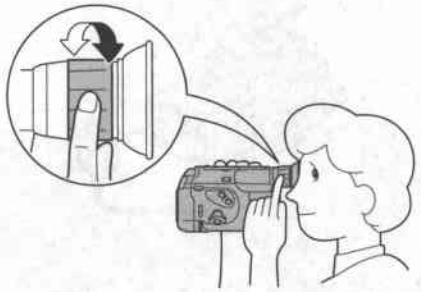
CAUTION:

TO REDUCE THE RISK OF ELECTRIC SHOCK AND TO REDUCE ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSORIES ONLY.



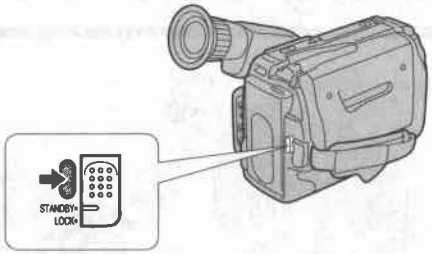
7 Set the STANDBY/LOCK switch to STANDBY.

- The camera is now in "record pause mode." If you leave it in this mode for more than about five minutes, it will turn itself off.



8 Adjust the viewfinder.

- Turn the viewfinder focusing ring until the viewfinder displays are clearly focused.



9 Press the start/stop button to begin recording.

- You can stop and start recording as often as you like by pressing the start/stop button.
- Set the STANDBY/LOCK switch to LOCK to save battery power when not recording.



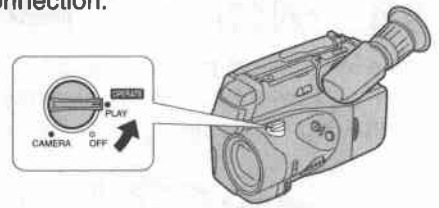
When you have finished using the camera:

- Set the OPERATE switch to OFF.
- Unload the cassette.
- Detach the battery pack.
- Replace the lens cap.

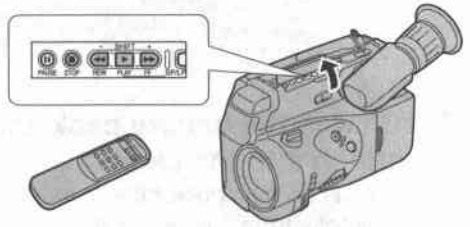
Playback



You can play back your recordings in the viewfinder right away. See "Playback" for details.
For playback on a TV, see "Playback Connection."



1 Set the OPERATE switch to PLAY.



2 Press the PLAY ▶ button to start playback.

- To end playback, press the STOP ■ button.
- To wind the tape forwards, stop playback and press the FF ▶▶ button.
- To wind the tape backwards, stop playback and press the REW ◀◀ button.

Handy Recording and Playback Guide



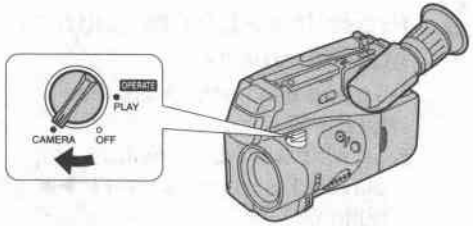
Recording

For more information, refer to "Basic Recording," "Power Sources," "Cassettes" and "Preparing the Camera."

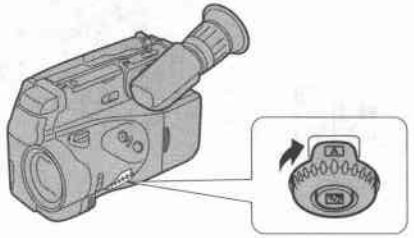


1 Charge the battery pack and attach it to the camera.

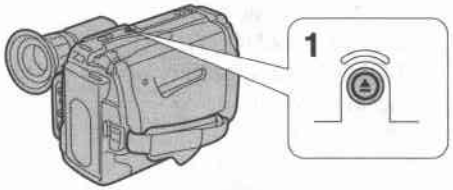
- You can also power the camera directly from a mains outlet.

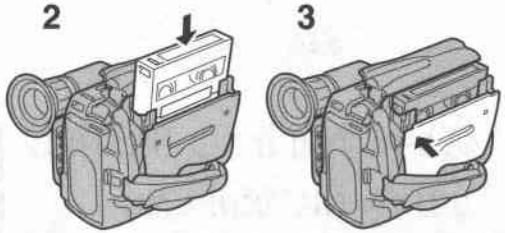


2 Set the OPERATE switch to CAMERA.



3 Set the Program AE selector to [A].



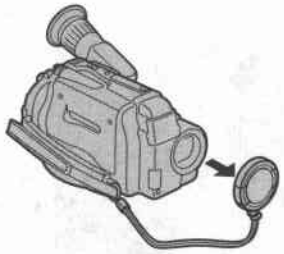


4 Load the cassette.

- Press the ▲ (eject) button to open the cassette compartment. Press the [PUSH] mark to close it.



5 Fasten the grip belt.



6 Remove the lens cap.

- Clip it onto the grip belt.

Continued...

E ENGLISH
UC600 PAL

PUB. DIEN-108
0894SZ3.6

© CANON INC. 1994

PRINTED IN JAPAN
IMPRIME AU JAPON

Thank you for choosing a Canon

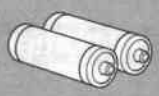
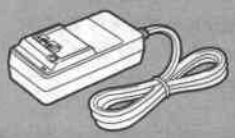
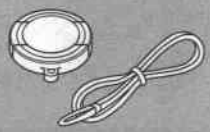
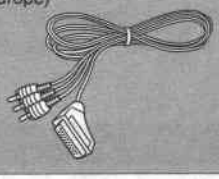
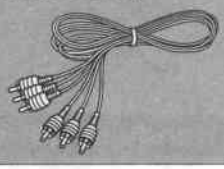
First, we'd like to thank you for buying this Canon camcorder. Its advanced technology makes it very easy to use — you will soon be making high-quality home videos which will give you pleasure for years to come.

To get the most out of your new camcorder, you should read this manual thoroughly — there are many sophisticated features which will add to your recording enjoyment.

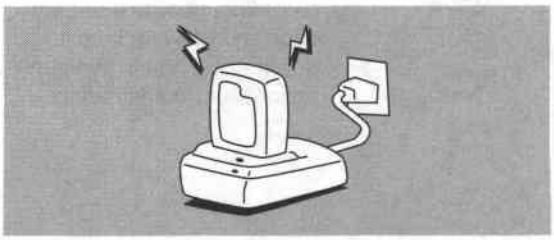
To get started, you will need to read these sections:
"Basic Recording"
"Power Sources"
"Cassettes"
"Preparing the Camera"
Then you can go on to find out about the more advanced features.

As well as using the alphabetical index, you can look up the different parts and functions in the sections called "Nomenclature" and "Viewfinder Displays." There's also a "Troubleshooting" section in case you run into any problems.

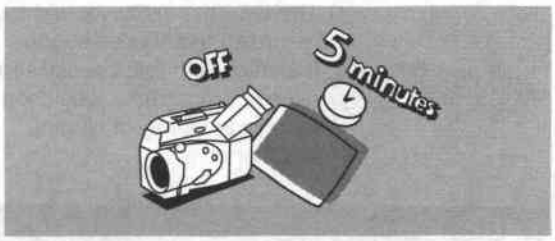
Check that this package contains the following accessories:

WL-60 Wireless Controller 	Two AA batteries (R6) 	CA-R200 Compact Power Adapter 	DC-100 DC Coupler 
BP-E77K Battery Pack 	Lithium battery (CR2025) 	SS-300 Shoulder Strap 	Lens cap and lens cap cord 
PC-170ST Stereo SCART Cable (Europe) 	STV-150 Stereo Video Cable (Asia and Oceania) 		

And while you are finding out how your camcorder works, remember:



The battery pack must be charged before it can power the camcorder.



If you leave the camera in record pause mode for more than about five minutes, it will turn itself off to prevent the video heads being damaged.

Introducing the UC600

Optical Image Stabilizer



Canon's revolutionary Vari-Angle Prism compensates for the slightest movement of the camera, producing stable images without sacrificing picture quality.

Hi-fi stereo sound



The compact integral microphone offers the depth and realism of AFM (Audio Frequency Modulation) in full dynamic stereo.

12X zoom



From wide-angle to 12X telephoto — the UC600 makes it easy to get just the shot you want, with a variable-speed rotary zoom control and convenient viewfinder graphics.

Digital Integrated Circuit



The UC600 features the latest advances in digital signal processing, for image reproduction unmatched by any camcorder in its class.

Video light



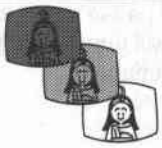
The UC600's built-in video light brightens up your recordings at the touch of a switch. Recording in low light (or no light) has never been easier.

Program AE



The UC600 puts advanced recording techniques at your fingertips with four specialised exposure programs, designed for a wide variety of lighting situations.

Fade



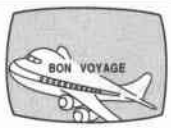
Add an atmospheric touch to your video productions with smooth fades, synchronised with the soundtrack.

Macro autofocus



With fast and accurate focusing down to a single centimetre (⅜ inch), you can zoom in to make the smallest details fill the screen.

Character generator



You don't need any extra equipment to add titles to your home videos — the UC600 does it all.

High-speed shutter



For advanced image control, choose from seven fast shutter settings. A top speed of 1/10000 second lets you capture even the quickest action.

Easy editing



As well as versatile record search and review functions, the UC600 is equipped with a LANC remote control terminal, allowing easy connection to editing equipment.

Remote control



The supplied wireless controller operates both recording and playback from as far away as 5 metres (16 feet).

Handy power supply



Connect the camera directly to a mains outlet for indoor recording; charge a battery pack and you can take it anywhere. There's even an optional car battery adapter.

Contents

Introduction

Important Usage Instructions 2
Thank you for choosing a Canon 3
Introducing the UC600 4

Basic Operation

Basic Recording 6
Power Sources 7
Cassettes 11
Preparing the Camera 12
Playback 13
Playback Connection 14

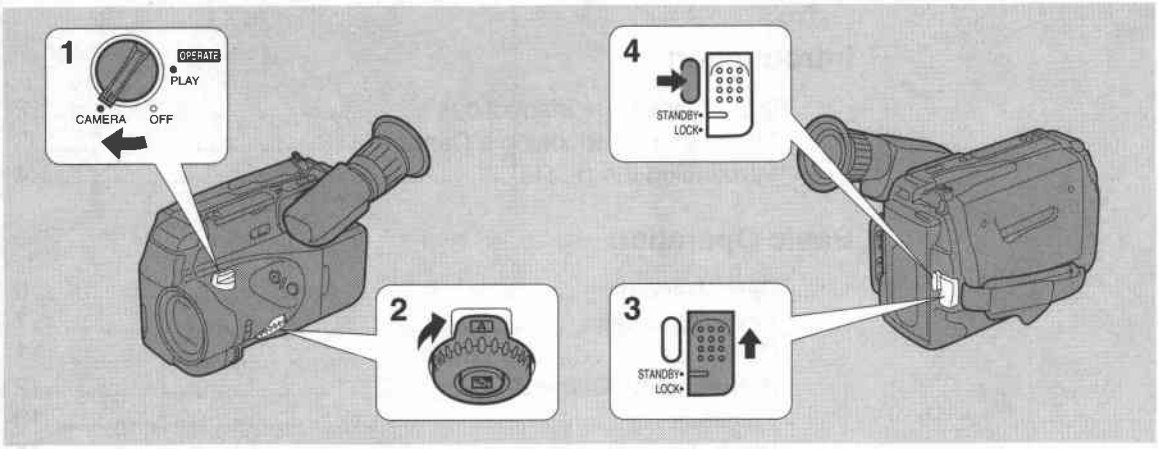
Advanced Functions

Zooming 17
Optical Image Stabilizer 18
Wireless Controller 19
Date and Time 20
Titles 21
Fade 22
Exposure Control 23
High-Speed Shutter 24
Video Light 25
Focusing 26
Record Search and Record Review 27
Editing to a VCR 28

Additional Information

Making Better Videos 29
UC600 Video System 30
Optional Accessories 31
Cautions and Maintenance 33
Troubleshooting 35
Viewfinder Displays 36
Nomenclature 37
Specifications 39
Index 40

Basic Recording



Before you start recording:

Complete the following steps:
- Attach a power source (p. 7).
- Load a cassette (p. 11).
- Adjust the viewfinder, fasten the grip belt and take off the lens cap (p. 12).

You may also want to install the lithium battery (p. 10) in order to set the date and time display (p. 20).

To record:

1. **Set the OPERATE switch to CAMERA.**

2. **Turn the Program AE selector to [A].**

3. **Set the STANDBY/LOCK switch to STANDBY.**
 - The operation indicator lights up and "PAUSE" appears in the viewfinder — the camera is now in "record pause mode."

4. **Press the start/stop button to begin recording.**
 - The tally lamp flashes rapidly and "REC" appears in the viewfinder.

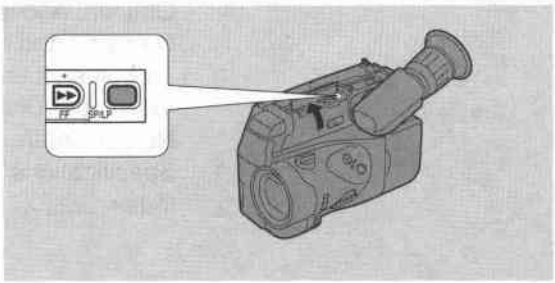
5. **Press the start/stop button again to pause recording.**
 - The camera returns to record pause mode and "PAUSE" reappears in the viewfinder.
 - You can stop and restart recording as often as you like by pressing the start/stop button.
 - The camera will turn itself off if you leave it in record pause mode for more than about five minutes. To return to record pause mode, set the STANDBY/LOCK switch to LOCK and then back to STANDBY, or set the OPERATE switch to OFF and then back to CAMERA.

6. **Return the STANDBY/LOCK switch to LOCK.**
 - As long as the OPERATE switch is set to the CAMERA position, you can use the STANDBY/LOCK switch to turn the camera on and off. This makes it easy to save battery power, and prevents accidental operation of the start/stop button.
 - If you turn the camera off using the STANDBY/LOCK switch, it will remember manual focus and shutter speed settings, and whether or not a title was displayed in the veiwfinder. If you move the OPERATE switch from the CAMERA position, these settings are erased from the memory.

When you have finished recording:

- Unload the cassette.
- Set the OPERATE switch to OFF.
- Disconnect the power source.

Selecting the tape speed



You have a choice of two recording speeds:
- Standard Play (SP) for maximum quality
- Long Play (LP) for double recording time

You can change the tape speed by pressing the SP/LP button. ("SP" or "LP" is displayed in the viewfinder.) Change tape speed in record pause mode — changing during recording will cause noise on the tape.
The camera automatically selects the appropriate speed for playback.

Power Sources

Before operating your camera, you will need to use the CA-R200 Compact Power Adapter to:

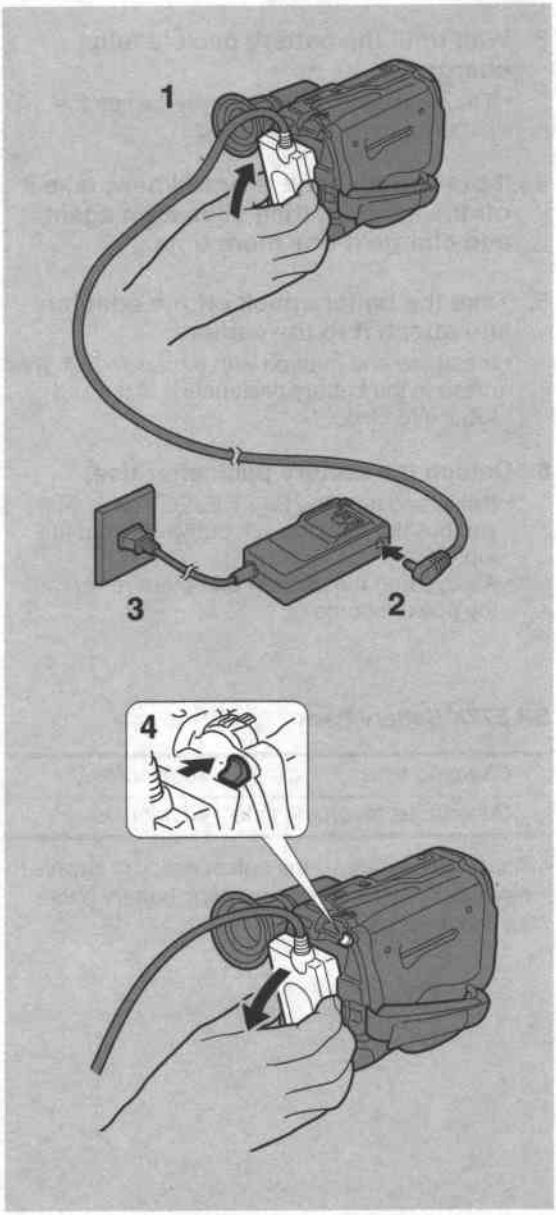
provide power from a mains outlet
or
charge a battery pack

Notes:
- The CA-R200 Compact Power Adapter converts current from a household mains outlet (100–240 V AC, 50–60 Hz) to the 6 V DC current used by your camera.
- If the adapter is used next to a TV, it may cause the TV to emit noise — move the adapter away from the TV or the aerial cable.
- See the CA-R200 instruction manual for further details.

Connecting the camera to a mains outlet

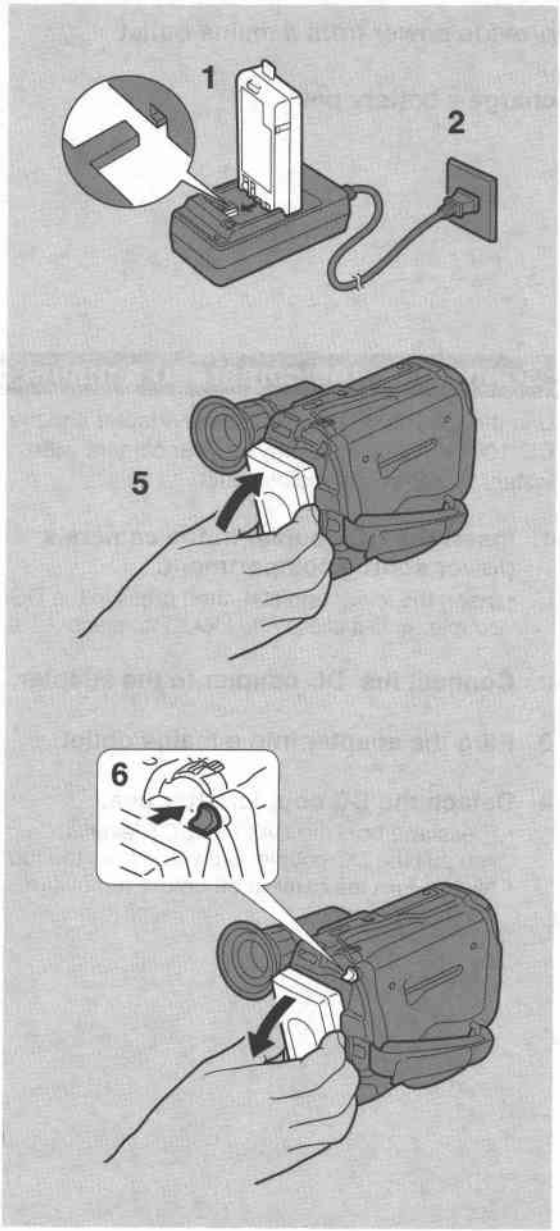
Use the CA-R200 Compact Power Adapter and the DC-100 DC Coupler to provide your camera with instant power from a mains outlet.

1. **Insert the DC coupler in the camera's power source compartment.**
 - Insert the lower end first, then press in the DC coupler until it clicks and locks into place.
2. **Connect the DC coupler to the adapter.**
3. **Plug the adapter into a mains outlet.**
4. **Detach the DC coupler after use.**
 - Press and hold the BATT EJECT lever while you pull the DC coupler outwards from the top.
 - Always turn the camera off before removing the power source.



Charging and attaching the battery pack

You will have to charge the battery pack before you can use it. A brand new battery pack must be charged twice before use. Use the CA-R200 Compact Power Adapter.



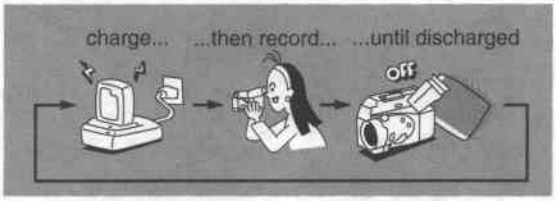
1. **Slide the battery pack onto the adapter as shown.**
 - The guide on the adapter fits into the slot on the battery pack.
 - Make sure the DC coupler is not connected.
2. **Plug the adapter into a mains outlet.**
 - The CHARGE/REFRESH indicator flashes red to show that charging is in progress.
3. **Wait until the battery pack is fully charged.**
 - The indicator glows steadily red when the battery pack is fully charged.
4. **If the battery pack is brand new, take it off the adapter, then slide it on again and charge it one more time.**
5. **Take the battery pack off the adapter and attach it to the camera.**
 - Insert the end marked with a triangle first, then press in the battery pack until it clicks and locks into place.
6. **Detach the battery pack after use.**
 - Press and hold the BATT EJECT lever while you pull the battery pack outwards from the top.
 - Always turn the camera off before removing the power source.

BP-E77K Battery Pack

Charging time	*70 minutes*
Continuous recording time	*40 minutes*

- These times vary — the safest policy is always to have two or three times as many battery packs as you think you will need.

Battery pack notes



Charge the battery pack before you use it...

- You should charge a brand new battery pack twice before using it for the first time — a single charge may not be enough. Charge it completely (until the adapter's charge indicator glows steadily), then disconnect it and charge it again. Normally, you should not "double charge" the battery pack in this way.
- The battery pack will naturally discharge itself over time. You should charge it the same day you plan to use it, or the day before.
- The battery pack becomes warm during use (and during charging). Wait for it to cool before charging or using it again.
- See the adapter instructions for details.

...save power while you are recording...

- You will get more recording time from your battery pack if you turn the camera off between shots, instead of leaving it in record pause mode.
- Recording time will be shorter than usual at low temperatures. You can use the battery pack between 0° and 40°C (32°–104°F), but it works best between 10° and 30°C (50°–86°F).

...and don't recharge it until it is exhausted.

- The camera flashes a ⊏◁ warning when the charge has almost run out. After a few more minutes' use, the camera turns off automatically. You can now either recharge or store the battery pack.

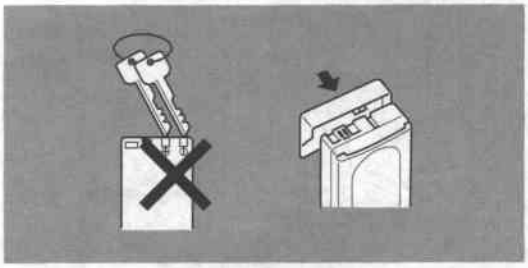
Disconnect the battery pack when you are not using it.

- Even when it is turned off, the camera will continue to slowly drain power from the battery pack. This means the battery pack will be discharged beyond the normal level if you leave it attached for a long time.

Keep the terminals clean.

- The camera, adapter or battery pack will not work properly if the terminals are dirty. Check them before use, and wipe them with a dry cloth or tissue if necessary.

DANGER!



Always attach the terminal cover.

- Do not allow any metal objects to touch the terminals. The battery pack contains a great deal of energy and short-circuiting it may cause a fire. Attach the terminal cover whenever you are not using the battery pack.

Treat the battery pack with care.

- Keep it away from fire (or it might explode).
- Do not try to disassemble or modify it.
- Do not drop or knock it.
- Do not get it wet.

Remember, it may start to give you less recording time...

- If you recharge it without first completely discharging it.
- If you leave it attached to the camera (or a video light) for more than a week.
- If you don't use it for three months or more.

...but you should be able to "refresh" it.

- The CA-R200 Compact Power Adapter has a refresher function which restores battery packs to full capacity (see p. 10).
- If this does not improve the battery pack's performance, it has reached the end of its life and must be replaced.

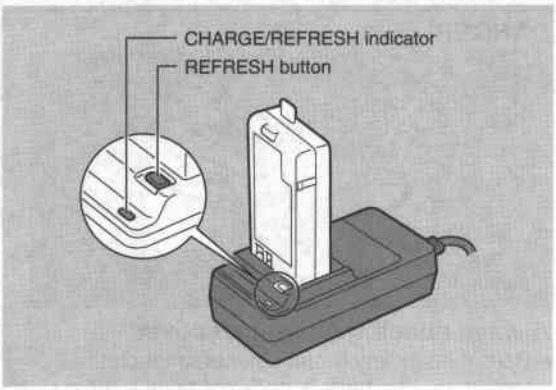
Specifications

BP-E77K Battery Pack

Battery type	*Rechargeable nickel cadmium battery*
Rated voltage	*6 V DC*
Operating temperature	*0°–40°C (32°–104°F)*
Battery capacity	*1100 mAh*
Dimensions	*22.5 X 47 X 90 mm (⅞ X 1⅞ X 3⅝ in)*
Weight	*150 g (5¼ oz)*

- Weight and dimensions are approximate.
- The specifications and appearance of the battery pack are subject to change without notice.

Refreshing the battery pack



If the battery pack starts to give less recording time, use the adapter's refresher function to restore it to full capacity. The adapter will first discharge the battery pack, and then recharge it.

1. **Attach the battery pack to the adapter and plug it into a mains outlet.**
 - See p. 8.

2. **Press the REFRESH button.**
 - The flashing CHARGE/REFRESH indicator changes colour from red to green, to show that discharging is in progress. When the battery pack is discharged, the indicator begins to flash red and recharging begins.

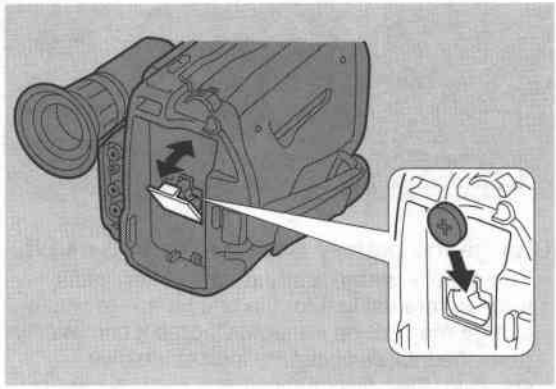
3. **Remove the battery pack when discharging/recharging has finished.**
 - The indicator glows steadily red when recharging is completed.
 - If you only want to discharge the battery pack, there is no need to plug in the adapter. In this case, you can remove the battery pack when the CHARGE/REFRESH indicator stops flashing green.

Recording and recharge times

Battery pack	*BP-E77K*	*BP-729*
Normal recording	*40 min.*	*1 hr. 50 min.*
With video light	*20 min.*	*1 hr.*
Discharge	*4 hr.*	*10 hr.*
Recharge	*1 hr. 10 min.*	*2 hr. 30 min.*
Total refresh charge	*5 hr. 10 min.*	*12 hr. 30 min.*

- These times are approximate.

Installing the lithium battery



Even when the camera is turned off, it can remember the date and time and other settings. Its memory is powered by a CR2025 lithium battery with a life span of about a year.

The mark flashes in the viewfinder if you have not installed the lithium battery, or if it is almost exhausted.

1. **Remove the cover from the lithium battery compartment.**
 - If you are replacing an old battery, take it out by pressing it slightly downwards and then pulling it outwards from the top edge.

2. **Place the new battery in the compartment with the + side facing outwards.**
 - Do not pick up the battery using tweezers or other metal tools — this may cause a short circuit.
 - Wipe the battery with a clean, dry cloth to ensure proper contact.

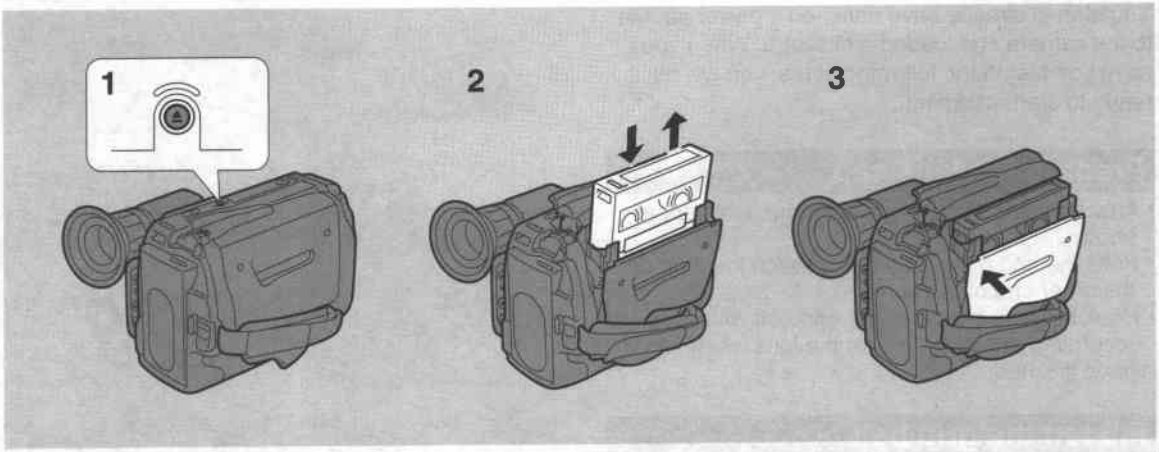
3. **Click the cover back into place.**

4. **Reset the date and time and title.**

WARNING!
The battery used in this device may present a fire or chemical burn hazard if mistreated. Do not recharge, disassemble, heat above 100°C (212°F) or incinerate. Replace the battery with a Sanyo CR2025, Panasonic CR2025 or Duracell DL2025B. Use of another battery may present a risk of fire or explosion. The used battery should be handed back to the supplier for safe disposal.

Cautions:
- Keep the battery out of reach of children — if it is swallowed, contact a physician immediately.
- Do not disassemble, heat, or immerse the battery in water, to avoid the risk of explosion.

Cassettes



Use video cassettes with the 8 mark (P5 type).

Loading and unloading

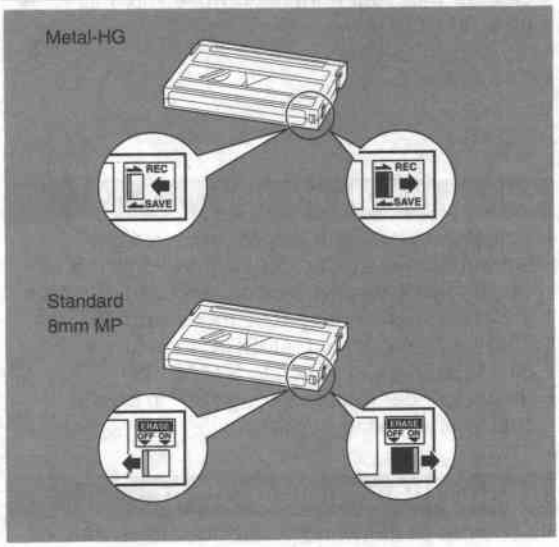
Cassettes can be loaded and unloaded with the camera turned off, as long as a power source is attached.

1. **Press the ⏏ (eject) button and wait for the cassette compartment to open.**

2. **Load/unload the cassette.**
 - Insert the cassette gently with the window facing out.
 - Remove the cassette by pulling it straight out.

3. **Press the PUSH mark on the compartment until it clicks, and wait for it to close.**
 - Never push down the top of the compartment.

Preventing accidental erasure



To protect your recordings from accidental erasure, slide the red switch on the cassette to the SAVE or ERASE OFF position (covering the hole).
When this cassette is loaded, the mark will flash in the viewfinder if you turn the OPERATE switch to CAMERA.
If you want to record on the cassette again, push the red switch on the cassette back to the REC or ERASE ON position.

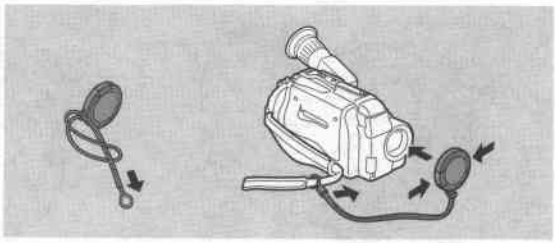
Notes:
- Do not interfere with the compartment while it is opening or closing automatically.
- After loading a cassette, use record search (p. 27) to find the point where you want to start recording.
- Do not leave the cassette in the camera after use — return it to its case and store it in a cool, clean, dry place.
- The holes in the back of the cassette are used for transferring information — do not cover them.

Preparing the Camera

You should already have attached a power source to the camera and loaded a cassette. When you have completed the following steps, you will be ready to start recording.

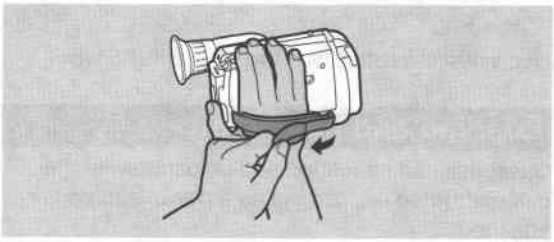
Prepare the lens cap

- Attach the cord to the eyelet on the lens cap, as shown.
- Pass the end of the grip belt through the loop on the other end of the cord.
- Hook the lens cap on to the grip belt while you are recording, and place it over the lens when you have finished.



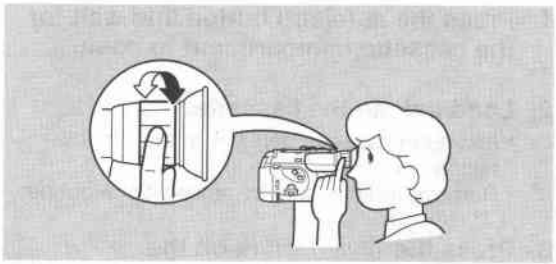
Fasten the grip belt

- Release the Velcro fastening and hold the camera with your right hand while you adjust the belt with your left.



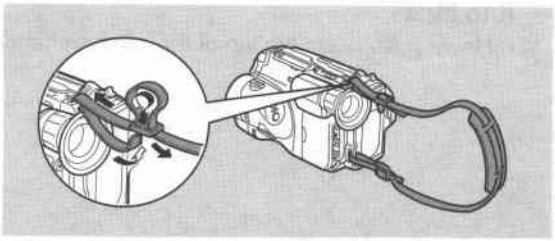
Adjust the viewfinder

- Adjust the viewfinder to suit your eyesight by turning the viewfinder focusing ring until the viewfinder displays are clearly focused. First put the camera in record pause mode (turn the OPERATE switch to CAMERA and set the STANDBY/LOCK switch to STANDBY).
- The viewfinder rotates through 90° to give a choice of shooting positions.

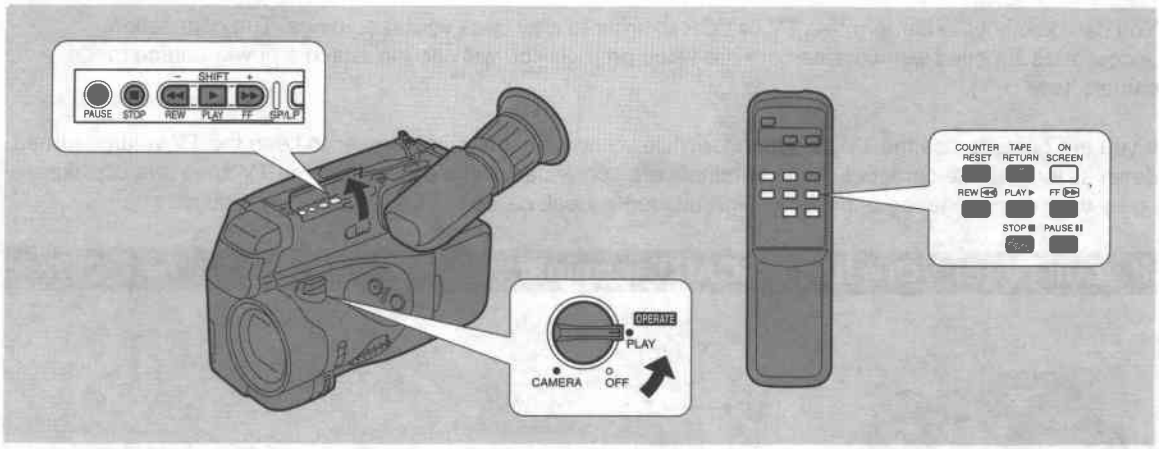


Attach the shoulder strap

- For extra security and portability, attach the shoulder strap before using the camera.
- Pass the ends through the attachment bars and adjust the length as shown.



Playback



You can use the viewfinder screen for instant, on-the-spot playback.
To play back your recordings on a TV, see p. 14.
To use the wireless controller, see p. 20.

1. **Attach a power source and set the OPERATE switch to PLAY.**
 - The operation indicator lights up.
 - The viewfinder (and connected TV screen) appear black.

2. **Load the cassette.**

3. **Press the PLAY ▶ button to start playback.**
 - To end playback, press the STOP ■ button.
 - To wind the tape forwards, stop playback and press the FF ▶▶ button.
 - To wind the tape backwards, stop playback and press the REW ◀◀ button.

Special playback

Still playback
Press the PAUSE ❚❚ button. To resume normal playback, press it again, or press the PLAY ▶ button. The camera automatically goes into stop mode after about five minutes' still playback.

Fast forward playback
To play back the recording at about 9 times normal speed, press and hold the FF ▶▶ button during normal playback.

Rewind playback
For reverse playback at about 7 times normal speed, press and hold the REW ◀◀ button during normal playback.

High-speed search
To play back the recording at about 19 times normal speed, press and hold the FF ▶▶ button during normal fast forward.
For reverse playback at about 19 times normal speed, press and hold the REW ◀◀ button during normal rewind.

Tape return

Use the wireless controller's TAPE RETURN button to quickly return to a scene you want to see again:

1. **Press the COUNTER RESET button during playback if you come across a scene you want to watch again later.**
 - The tape counter is reset to 0:00:00.

2. **When you have ended playback, press the TAPE RETURN button.**
 - The tape rewinds and stops when the counter nears 0:00:00.
 - You can cancel tape return by pressing the STOP ■ button.

3. **Start playback.**

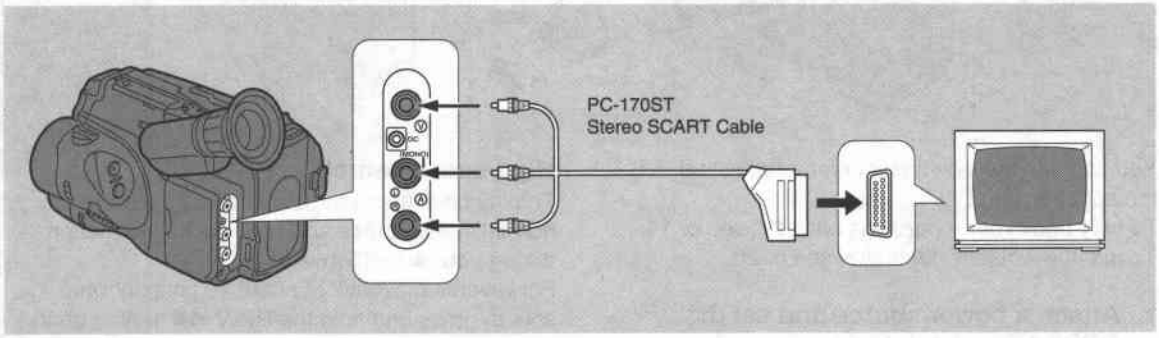
Notes:
- These special playback speeds are for recordings made in SP mode (see p. 6).
- Noise bars appear on the screen during special playback and the soundtrack cannot be heard. On certain TVs the picture may roll and divide, or appear in black and white, and the high-speed search picture may not be visible.
- During still playback, the picture flickers, and fast action scenes may appear blurred.
- The tape counter is reset when a cassette is loaded.

Playback Connection

You can connect the camera to a TV or VCR in order to play back your recordings. The connection accessories supplied with your camera are listed on p. 3. You will need to attach a power source to the camera (see p. 7).

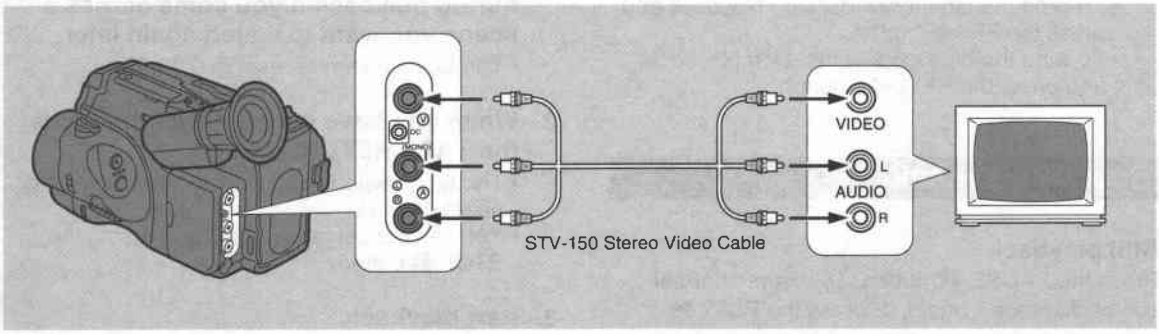
If you are going to use the TV as a monitor while you are shooting, remember to keep the TV volume turned down as long as the camera's audio terminals are connected. If the sound from the TV speakers is picked up by the microphone, an unpleasant high-pitched squeal, called feedback, may be produced.

If your TV (or VCR) has a SCART terminal:



1. **Connect the camera to the TV (or VCR).**
 - Use the PC-170ST Stereo SCART Cable. Connect the white plug to the white audio terminal Ⓛ (left). Connect the red plug to the red audio terminal Ⓡ (right). Connect the yellow plug to the yellow video terminal Ⓥ.
2. **If you are connecting the camera to a VCR, set the input selector on the VCR to LINE.**
 - See your VCR instruction manual for details.

If your TV (or VCR) has audio/video input terminals:

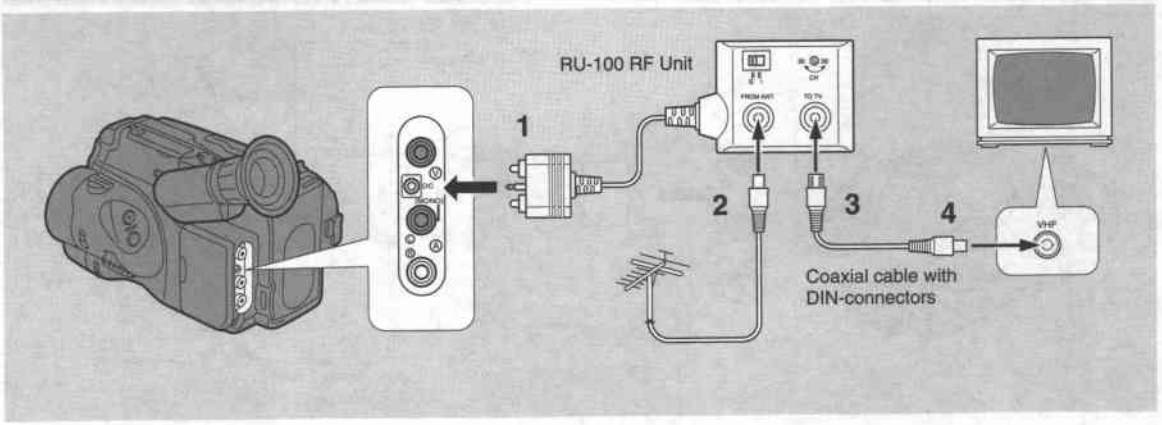


1. **Connect the camera to the TV (or VCR).**
 - Use the STV-150 Stereo Video Cable. Connect the white plug to the white audio terminal Ⓛ (left). Connect the red plug to the red audio terminal Ⓡ (right). Connect the yellow plug to the yellow video terminal Ⓥ.
 - Alternatively, you can use the ST-150 Stereo Cable to connect the audio terminals, and use the optional C-150 AV Cable to connect the video terminal. (Do not connect the white plug on the C-150).
2. **Set the TV/VIDEO selector on the television to VIDEO.**
3. **If you are connecting the camera to a VCR, set the input selector on the VCR to LINE.**
 - See your VCR instruction manual for details.

To obtain a mono output

Connect the cable to the camera's Ⓛ terminal, but do not connect the Ⓡ terminal. This will give an Ⓛ + Ⓡ monaural output.

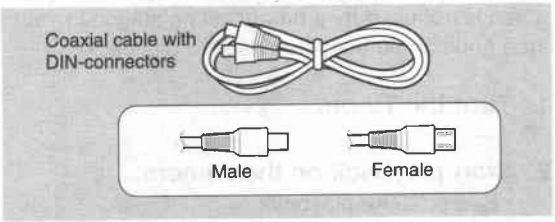
If your TV does not have audio/video input terminals (Europe):



If your TV is already hooked up to a VCR, you can connect the camera to the VCR instead of the TV. Follow the instructions on p. 14.

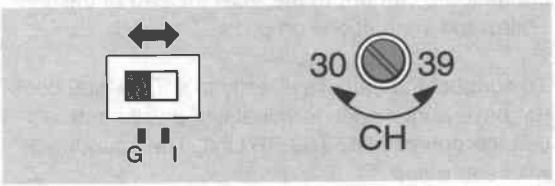
To connect the camera directly to a TV which does not have audio/video terminals, you will need to use the optional RU-100 RF Unit. The soundtrack will be in mono.

Connecting the RF unit



1. **Connect the RF unit to the camera.**
2. **Connect the aerial cable to the FROM ANT. terminal on the RF unit.**
3. **Connect the "female" DIN-connector on the coaxial cable to the TO TV terminal on the RF unit.**
4. **Connect the "male" connector to the aerial input on the TV.**
5. **Set both the TV and the RF unit to the video channel.**

Selecting the video channel



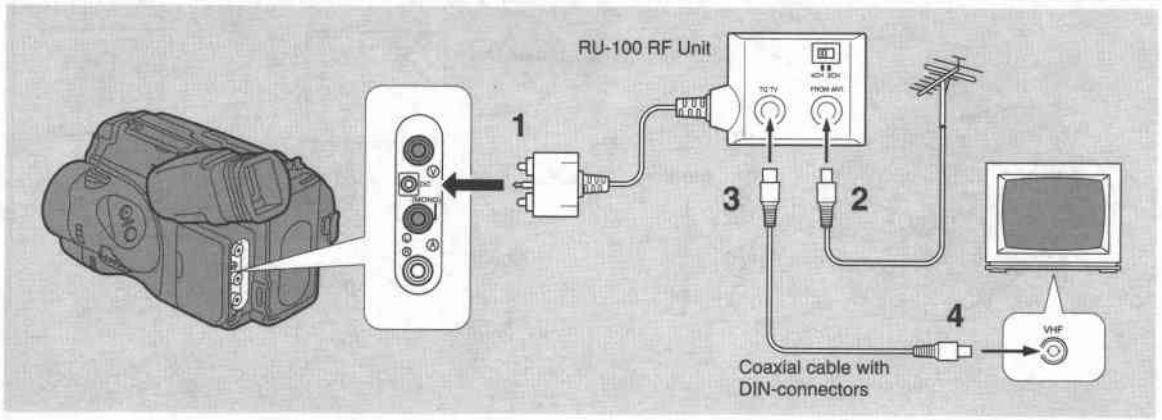
The video channel is the channel (somewhere between 30 and 39) which is not used by a broadcasting station in your area and can be used for cassette playback.

1. **Turn the TV on.**
2. **Start playback on the camera.**
 - See p. 13 for playback.
3. **Set the G/I selector on the RF unit.**
 - Use a flat screwdriver.
 - In continental Europe, set it to G.
 - In the UK, Hong Kong and South Africa, set it to I.
 - If it is not set properly, you will be able to see the picture, but not hear the sound.
4. **Set the TV and the CH selector on the RF unit to the video channel.**
 - For example, if the video channel in your area is channel 33, tune the TV to channel 33 and set the selector to 33 (using a flat screwdriver). Adjust it by turning until the picture is clear.
 - The selector is factory-set to channel 32.

To watch a TV programme

Turn the camera off or disconnect it from the RF unit when you want to watch a broadcast programme. If you leave the camera connected and turned on, the RF unit will automatically select the camera signal instead of the broadcast signal.

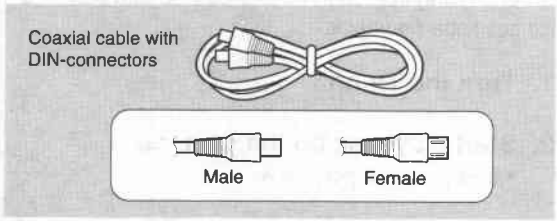
If your TV does not have audio/video input terminals (Australia):



If your TV is already hooked up to a VCR, you can connect the camera to the VCR instead of the TV. Follow the instructions on p. 14.

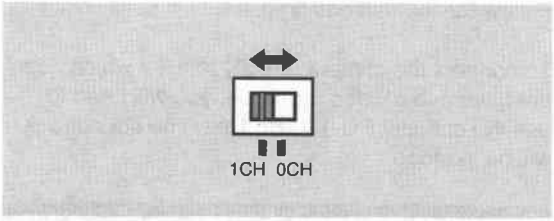
To connect the camera directly to a TV which does not have audio/video terminals, you will need to use the optional RU-100 RF Unit. The soundtrack will be in mono.

Connecting the RF unit



1. **Connect the RF unit to the camera.**
2. **Connect the aerial cable to the FROM ANT. terminal on the RF unit.**
3. **Connect the "female" DIN-connector on the coaxial cable to the TO TV terminal on the RF unit.**
4. **Connect the "male" connector to the aerial input on the TV.**
5. **Set both the TV and the RF unit to the video channel.**

Selecting the video channel



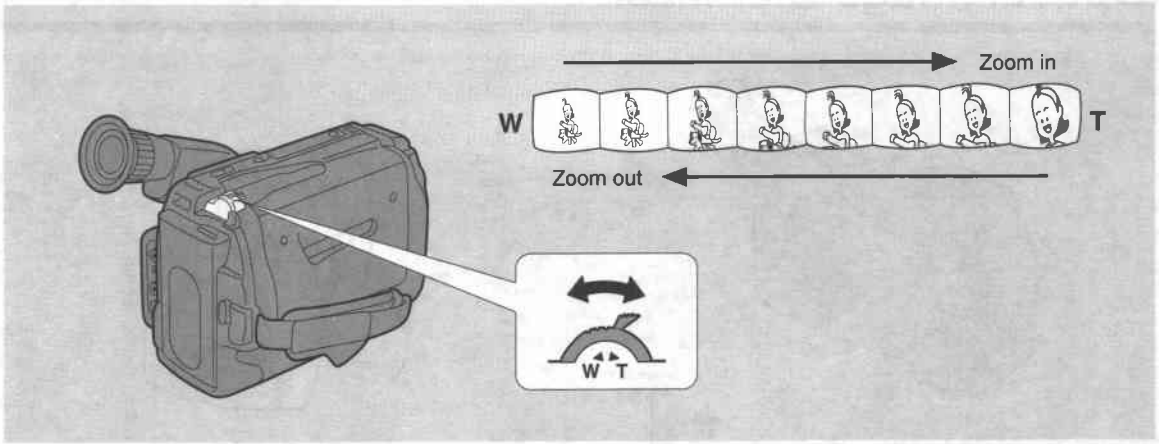
The video channel is the channel (either 0 or 1) which is not used by a broadcasting station in your area and can be used for cassette playback.

1. **Turn the TV on.**
2. **Start playback on the camera.**
 - See p. 13 for playback.
3. **Set the TV and the selector on the RF unit to the video channel.**
 - For example, if the video channel in your area is channel 0, tune the TV to channel 0 and set the selector to 0CH (using a flat screwdriver).

To watch a TV programme

Turn the camera off or disconnect it from the RF unit when you want to watch a broadcast programme. If you leave the camera connected and turned on, the RF unit will automatically select the camera signal instead of the broadcast signal.

Zooming



The camera's 12X zoom lens allows you to choose the best picture angle for each scene:

- Turn the zoom control towards W to zoom out to wide-angle.
- Turn it towards T to zoom in to telephoto.

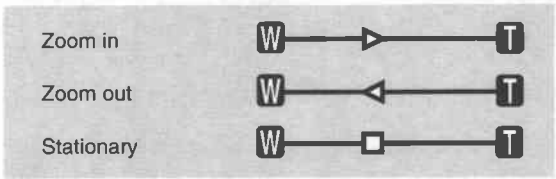
You can also control the speed of zooming:

- Move the control slightly to zoom slowly.
- Turn it further to zoom more quickly. (The further you turn the zoom control, the faster the zoom speed.)

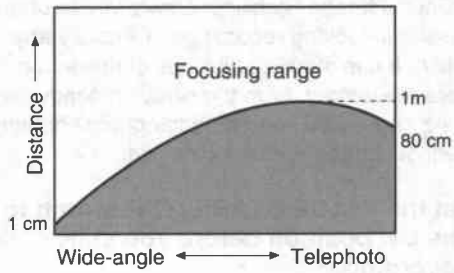
The T and W buttons on the wireless controller adjust the picture angle, but not the zoom speed:

- Press W to zoom out to wide-angle.
- Press T to zoom in to telephoto.

Viewfinder displays



Minimum focusing distance

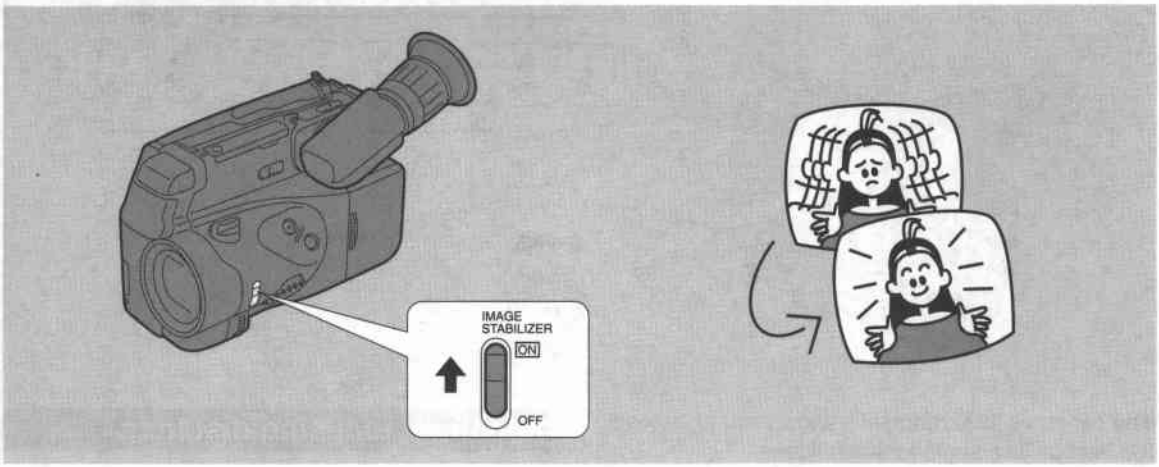


When you are shooting at the widest angle, you can bring the camera as close as 1 cm (⅜ inch) and the subject should still be clearly focused.
At the furthest telephoto position, however, the subject will be out of focus if it is any closer than 80 cm (2 feet 8 inches).
This change in the minimum focusing distance is shown in the diagram.

Notes:

- Overuse of the zoom may make recordings seem too busy. It is generally better to use it sparingly, or in order to reframe between shots.
- Even slight hand movements will be noticeable during telephoto recording. Use a tripod for better results.

Optical Image Stabilizer



The Optical Image Stabilizer allows you to obtain professional-looking recordings in virtually any situation. It can stabilize all kinds of unwanted camera movement, from the slow, unsteady shaking caused by hand-held telephoto shooting, to the fast vibrations of a moving car.

1. Set the IMAGE STABILIZER switch to the ON position before you start recording.

- The ((✋)) mark appears in the viewfinder.

2. Return the switch to the OFF position when you have finished.

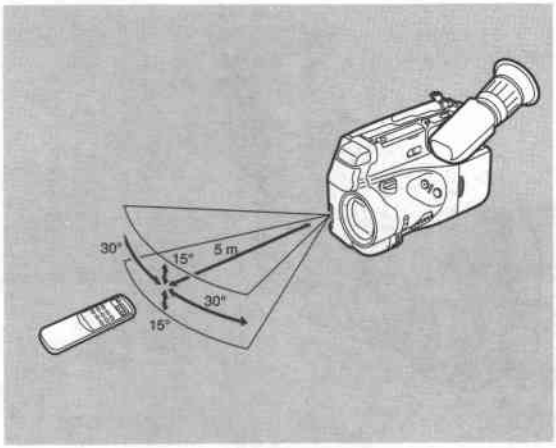
About the Vari-Angle Prism

The Vari-Angle Prism is the key to this revolutionary image stabilizer. It is formed from two glass discs, coupled with a super-flexible film and filled with a high-refractive-index liquid. Horizontal and vertical vibration sensors detect unintentional camera movements and the shape of the prism is adjusted instantly to compensate. Because this system is optical rather than electronic, there is no loss of picture quality when it is turned on.

Notes:

- The image stabilizer is designed to deal with a normal degree of camera shake — it cannot compensate for large movements of the camera.
- Keep the image stabilizer turned off when the camera is mounted on a tripod.
- The image stabilizer is not as effective as usual when the optional tele-converter is attached.

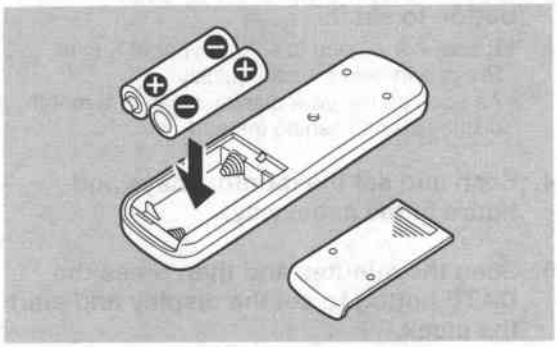
Wireless Controller



The wireless controller can operate the camera from a distance of up to 5 metres (16 feet). Point it at the camera's remote sensor while you press the buttons.
The tally lamp lights up to let you know that the camera is in range and responding to your commands.

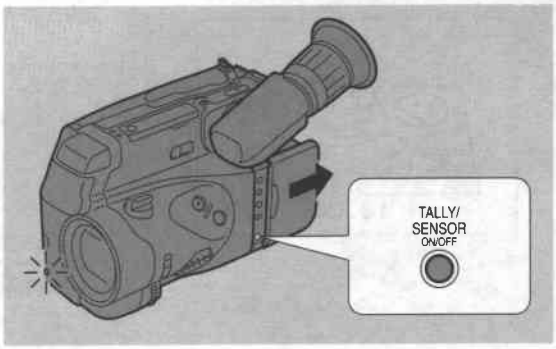
There are two functions which can only be operated using the wireless controller:
- Tape return (p.13)
- On-screen viewfinder displays (p. 36)

Inserting batteries



Insert two AA batteries, following the ⊕ and ⊖ markings. Be careful not to reverse the polarity of the batteries.

Turning off the tally lamp and remote sensor



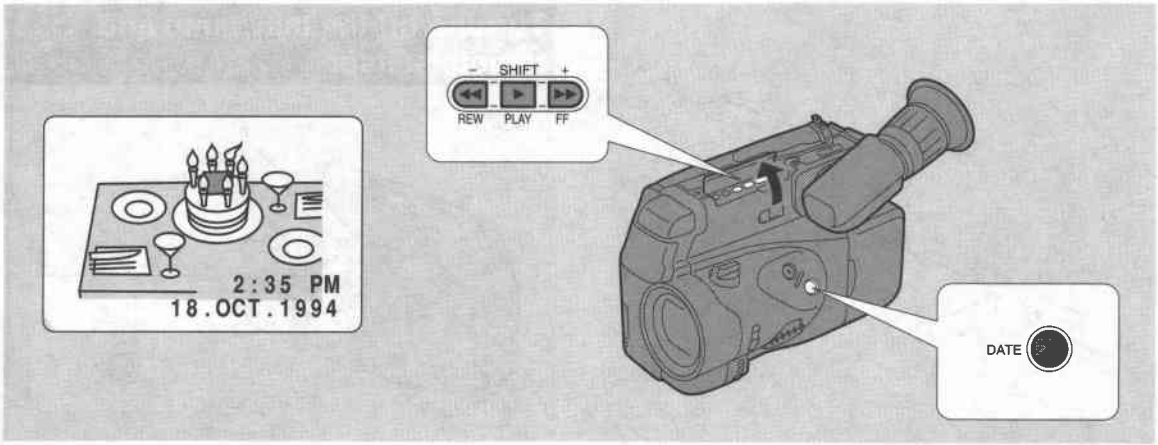
The tally lamp flashes continuously while the camera is recording. It can be turned off to prevent light being reflected into the lens during macro recording, or when shooting through glass.

Turning off the remote sensor prevents accidental operation by other wireless controllers being used nearby.

1. **Press the TALLY/SENSOR ON/OFF button to turn off the tally lamp and the remote sensor.**
 - "T/S OFF" appears in the viewfinder.
2. **Press the button again to turn the lamp and sensor on.**

Notes:
- Sunlight or fluorescent light falling on the sensor may shorten the controller's operating distance by interfering with its infrared signals.
- The camera may have difficulty picking up the remote control signals at extremely close range.
- Do not leave the controller exposed to direct sunlight, or in hot or humid places.
- When changing exhausted batteries, replace them all at once.

Date and Time

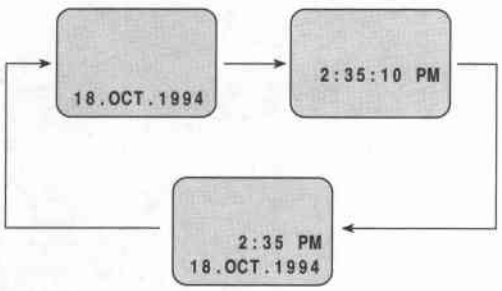


You can add the data and/or time to the scene you are recording.

The date/time display appears in the viewfinder when you press the DATE button. If you start recording now, it will be superimposed on the scene.

Press the DATE button again to cancel the display. If it does not appear in the viewfinder, it will not be recorded.

You can choose from three different display styles. Each time you press the SHIFT button, the display changes as follows:



If you have not set the date and time, "—:—:—" appears in the viewfinder when you press the DATE button. This will not be recorded.

Setting the date and time

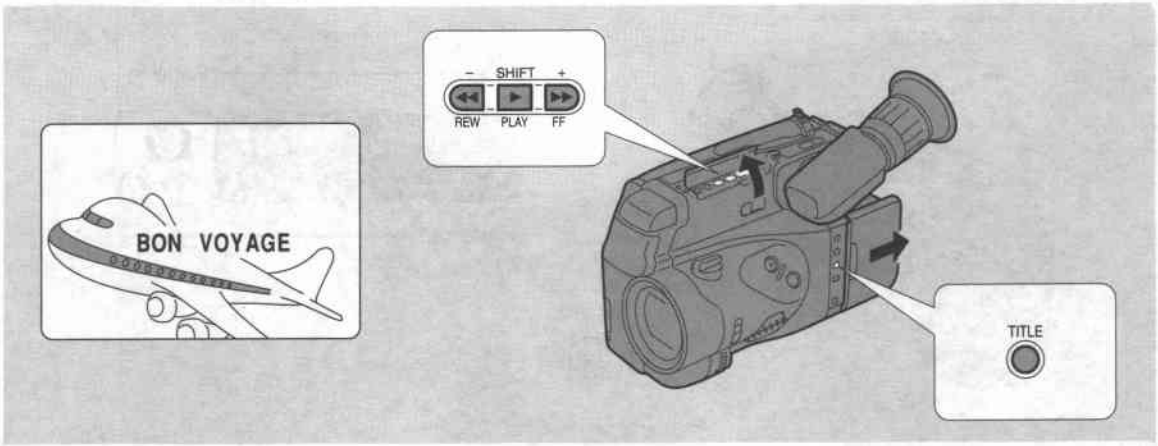
Set the date and time display when you first start using your camera. As long as you have installed the lithium battery (p. 10), the camera's internal clock will continue to work even when the main power source is removed.

1. **Set the OPERATE switch to CAMERA.**
2. **Press and hold the DATE button until the year display in the viewfinder starts flashing.**
3. **Press the + and – buttons to scan the year display, then press the SHIFT button to set it.**
 - Press + or – once to scan a year at a time. Press and hold to scan quickly.
 - As soon as the year display is set, the month display starts flashing instead.
4. **Scan and set the months, days and hours in the same way.**
5. **Scan the minutes and then press the DATE button to set the display and start the clock.**

Notes:

- The camera will remember which display style you have selected even when it is turned off.
- The display can be set to any year between 1994 and 2020.
- The camera knows the number of days in each month and which years are leap years.

Titles

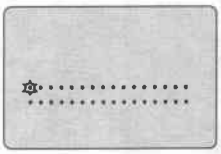


You can write your own titles and store them in the camera's memory in order to add them to your recordings. Remember to install the lithium battery first (see p. 10).

The title stored in the memory is displayed in the viewfinder when you press the TITLE button. If you start recording now, it will be superimposed on the scene.

Press the button again to cancel the display. If it does not appear in the viewfinder, it will not be recorded.

Writing a title



These lines appear in the viewfinder while you are writing a title.

Enter your title in the camera's memory before you start recording. The title can be one or two lines of up to 16 characters each.

1. **Set the OPERATE switch to CAMERA.**

2. **Press and hold the TITLE button until the title lines appear in the viewfinder.**
 - If you have already entered a title in the memory, it will be displayed in the viewfinder.
 - The first dot (or character) flashes to show where the cursor (the insertion point) is located.

3. **Press the SHIFT button to move the cursor to the point where you want to start the title.**
 - Press once to move the cursor one space right. Press and hold to move it quickly.

4. **Press the + and – buttons to scan the list of title characters.**
 - Press once to scan one at a time. Press and hold to scan quickly.
 - You can choose from the following characters:

 ↱ABCDEFGHIJKLMNOPQRSTUVWXYZ↰
 ↳⚙&✱!?;:'"-/.,9876543210⚙ËÇÑÆÅØÜÖÄ↲

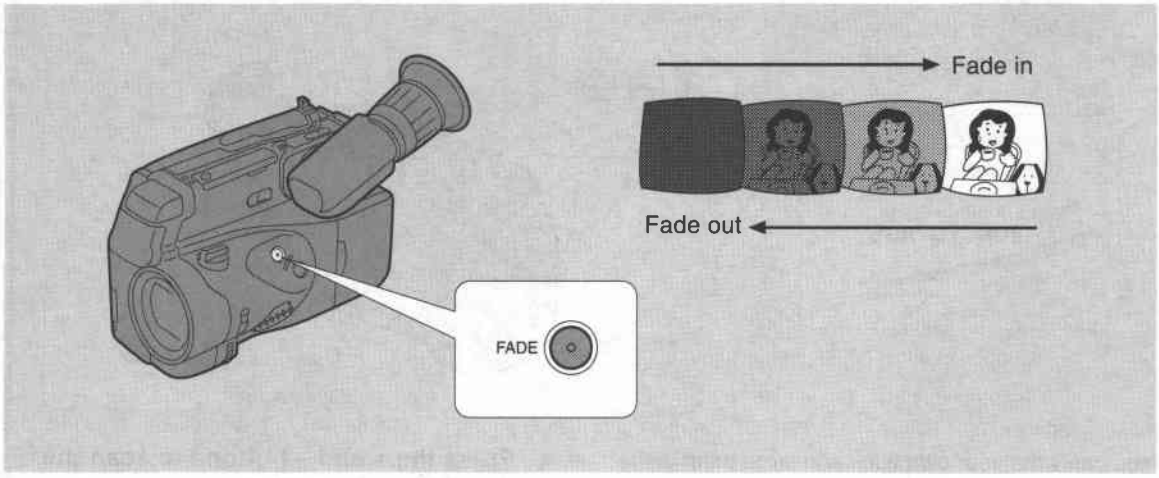
 - If you choose the flashing dot ⚙, nothing will be recorded at this position.
 - You can erase all the characters at and to the right of the cursor by pressing the C.RESET button.

5. **When the character you want is displayed, press the SHIFT button again to move the cursor to the point where you want to write the next character.**

6. **Repeat steps 4 and 5 until your title is complete, then press the TITLE button to enter the title in the memory.**

Notes:
- If it takes you longer than about five minutes to write a title, the camera may turn itself off before you have finished. You can prevent this by removing the cassette before you begin.
- The title display disappears from the viewfinder if you move the OPERATE switch from the CAMERA position.

Fade



Fade in

To make the scene gradually appear from a blank screen:

1. **Make sure the camera is in record pause mode.**
2. **Press and hold the FADE button until the scene disappears completely from the viewfinder.**
3. **Press the start/stop button to begin recording.**
4. **Release the FADE button.**
 - The scene gradually reappears in the viewfinder.

Fade out

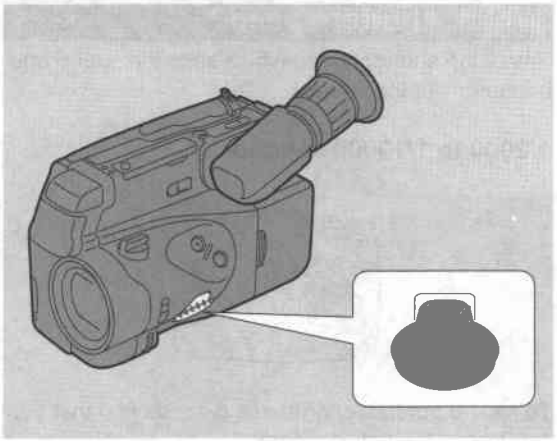
To make the scene gradually disappear:

1. **Press and hold the FADE button during recording.**
2. **When the scene has completely disappeared, press the start/stop button to end recording.**
3. **Release the FADE button.**

Notes:

- The sound fades together with the image.
- Title and date and time displays do not fade.

Exposure Control



Program AE

In normal recording conditions, you can leave the Program AE selector set to [A] (auto). However, the camera also has four special exposure programs, designed to give the best possible pictures in difficult situations.
Rotate the selector to choose the appropriate program before you start recording. Reset it to [A] when you have finished.

Sports





This program is useful for recording high-speed sports scenes in brightly lit conditions. Normal playback will be slightly jerky, but you will get clear images which can be analysed frame by frame during slow or still playback on a VCR.

Portrait





Use this program outdoors to make the subject stand out from a softened foreground and background. It works well for still-lifes and close-ups. The effect is most noticeable when the zoom position is between the middle range and the telephoto end. Focus manually for maximum accuracy.

Spotlight





This program is designed for recording spotlit scenes, such as on a stage. The exposure is automatically adjusted for glare-free recordings of subjects lit by a concentrated light source.

Sand & Snow

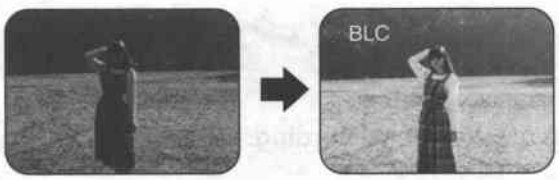




Use this program in places where the background is so bright that the subject appears underexposed in the viewfinder — a sunny beach or ski resort, for example.

Backlight compensation



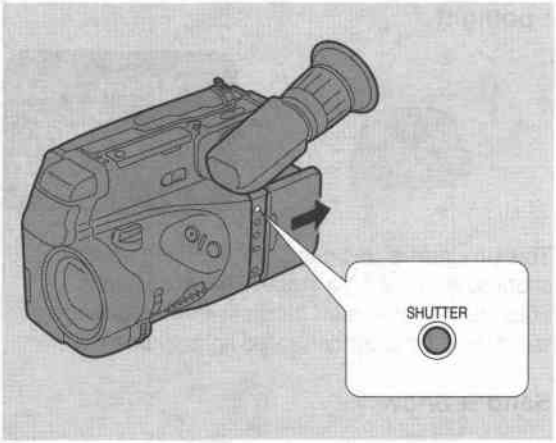


If the subject is brightly lit from behind, it may appear underexposed and lacking in detail. To compensate for this backlighting effect, press and hold the [BLC] button. Monitor the exposure in the viewfinder, and release the button when the compensation is no longer needed.
If there is very strong backlighting, use the video light (see p. 25).

Notes:

- The high-speed shutter can only be used when the selector is set to [A].
- Avoid switching AE settings during recording, as the brightness of the image may change suddenly.
- Smear or flicker may occur when using Program AE in some types of lighting.

High-Speed Shutter

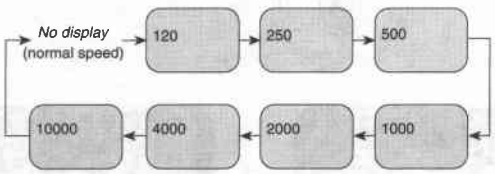


The shutter speed is usually set automatically, but you also have the option of seven fast shutter speeds, which are useful when recording very fast or very bright subjects.

A faster than usual shutter speed can also be used creatively in order to narrow the depth of field and throw the background out of focus.

1. **Turn the Program AE selector to [A].**

2. **Press the SHUTTER button to change the shutter speed.**
 - Each time you press the button, the viewfinder display changes as follows:



3. **Make your recording.**

4. **Press the SHUTTER button again to return to the normal shutter speed.**
 - The display disappears from the viewfinder.

Which shutter speed?

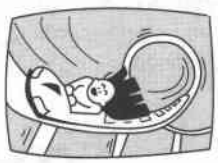
Select the shutter speed which suits the speed and brightness of the subject:

1/2000 to 1/10000 second



To record outdoor sports on a clear day so that you can freeze the action clearly.
Normal playback will be slightly jumpy, but on a VCR with a noise-free still playback function, you will get clear images which can be analysed frame by frame.

1/250 to 1/1000 second



To record outdoor action on a cloudy day, or for a more stable picture when shooting from a moving car.

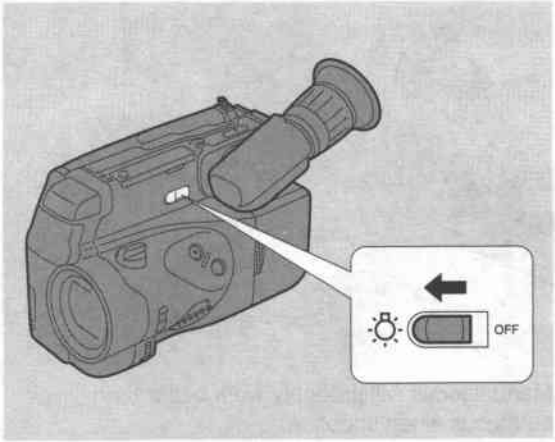
1/120 second



To reduce the exposure level when shooting very bright scenes, or to give more stable pictures when shooting indoor sports.

Notes:
- High speeds need more light than the normal shutter speed (1/50 second).
- The shutter setting is cancelled if you move the OPERATE switch from the CAMERA position, or if you move the Program AE selector from [A].

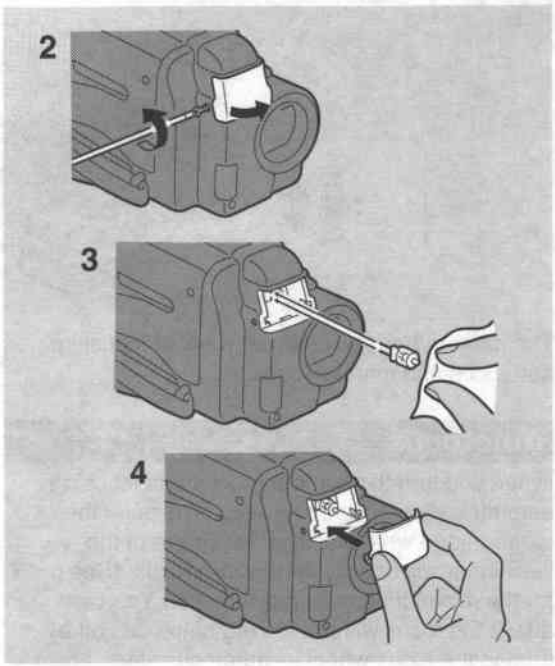
Video Light



The built-in video light allows you to make clear, colourful recordings of poorly lit indoor scenes. You can even record in complete darkness.

1. **Slide the light switch to the ☼ position to turn on the video light.**
 - The light will only turn on during recording or in record pause mode.
2. **Make your recording.**
3. **When you have finished using the light, slide the switch back to the OFF position.**

Replacing the bulb



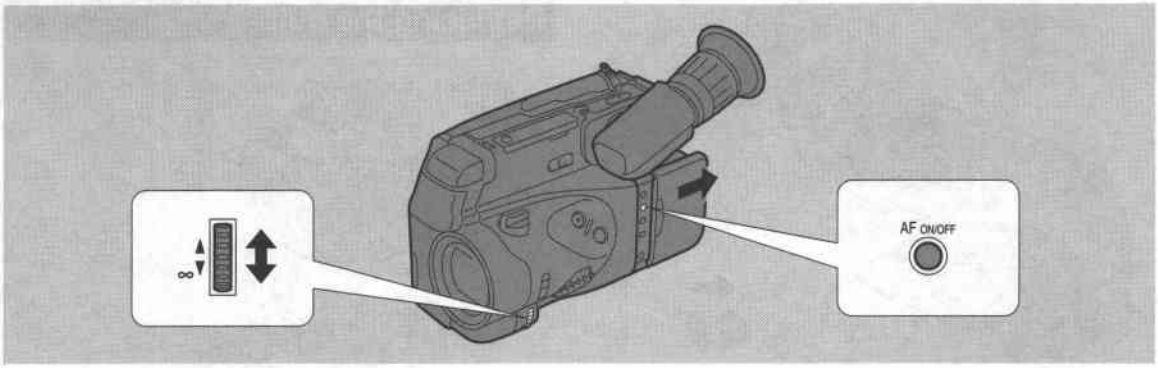
Use a Canon Halogen Bulb 5.7V 4W.

1. **Turn the camera off and give the bulb time to cool down.**
2. **Remove the bulb protector.**
 - First loosen the screw.
3. **Pull out the old bulb and gently insert the new one.**
 - Do not touch the new bulb with your bare hands — use a soft cloth.
4. **Replace the bulb protector.**
 - Don't forget to tighten the screw.

WARNING
Be careful not to touch the bulb during or immediately after use; it becomes very hot.

Notes:
- The light has a range of about 3 metres (10 feet).
- Not all of the scene will be illuminated during wide-angle recording.
- The BP-E77K Battery Pack provides enough power for about 20 minutes' use (see p. 10). For longer recordings you may prefer to use a power adapter.
- The light becomes hot during use — keep it away from plastic or flammable materials, and do not touch it.
- Do not knock the light, especially during use.

Focusing



The camera has two different ways of focusing: autofocus and manual focus.

Autofocus

When you turn the camera on, it starts focusing automatically — all you have to do is point the camera, and whatever is in the centre of the viewfinder will usually be in sharp focus. (See p. 17 for the minimum focusing distances.) You can adjust the focus without turning autofocus off by turning the focus wheel — autofocus starts again as soon as you release it.

Manual focus

Sometimes you will get better results by turning off autofocus and using manual focus instead.

1. **Use the zoom control to set the picture angle.**
 - If you use the zoom after manual focusing, the picture may go out of focus.
2. **Press the AF ON/OFF button to switch from auto to manual focus.**
 - "AF OFF" appears in the viewfinder.
 - The focus remains locked at the point set by autofocus.
3. **Use the focus wheel to set the focus.**
 - Turn it downwards (towards ∞) to move the focus further away. Turn it upwards to bring the focus nearer.
4. **Press the AF ON/OFF button again to return to autofocus.**

Manual focus will probably work better than autofocus when shooting:

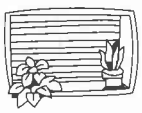

Subjects not in the centre of the viewfinder

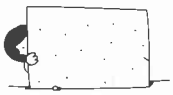

Several subjects in the viewfinder at different distances


Subjects behind wet or dirty glass


Rapidly moving subjects


Slanted subjects


Subjects with horizontal stripes


Subjects without much contrast (such as a white wall)


Subjects which reflect too much light (such as shiny car exteriors)

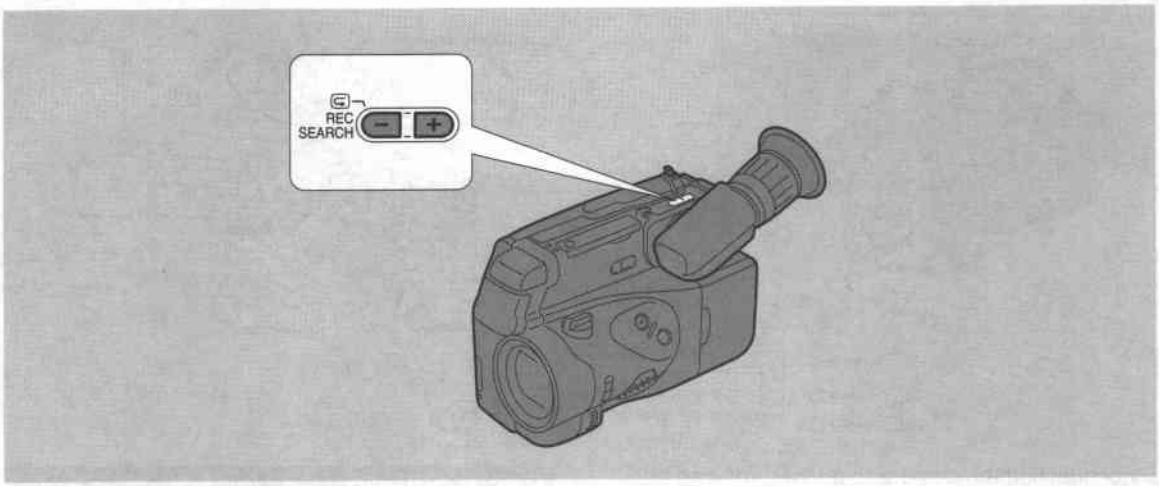

Dark subjects


Night scenes

Note:

- The manual focus setting is cancelled if you move the OPERATE switch from the CAMERA position.

Record Search and Record Review



Record search

When the camera is in record pause mode, you can use record search to play the tape forwards or backwards to find the point where you want to start or restart recording. This is useful when you want to add a new scene to a previously used cassette. By using record search, you can ensure a smooth, noise-free join between the new scene and the old one.

1. **Make sure the camera is in record pause mode.**

2. **Press and hold the REC SEARCH + or – button while you check the picture in the viewfinder.**
 - The + button plays the recording forwards and the – button plays it backwards.

3. **Release the button when you find the point where you want to start recording.**
 - The record search picture pauses briefly and then the camera returns to record pause mode.

Record review

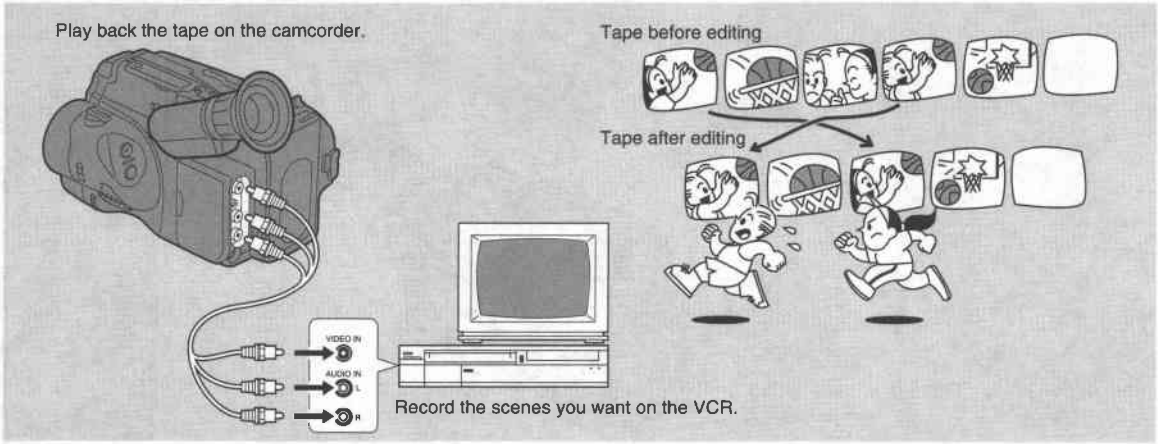
When the camera is in record pause mode, you can use record review to play back the last few seconds of your recording and then return automatically to record pause mode. You can quickly make sure that a scene has recorded properly and then go on to shoot the next scene, without producing any noise in the picture.

1. **Make sure the camera is in record pause mode.**

2. **Press and release the ⟲ (record review) button while you check the picture in the viewfinder.**
 - The camera rewinds the tape and plays back the last few seconds.
 - The camera returns to record pause mode at the point where you pressed the ⟲ button.

Note:
- Noise or skew (picture distortion) may appear on the screen during record search and record review.

Editing to a VCR



By connecting the camera to a VCR, you can edit your recordings in order to remove unwanted scenes — or combine different shots to create your own video production.

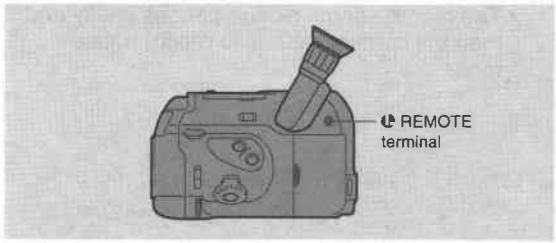
Preparations

1. **Connect the camera to the VCR.**
 - See "Playback Connection" on p. 14.
2. **Turn the TV on.**
 - Be sure to set it to the video channel, or set the TV/VIDEO selector to VIDEO.
3. **Turn on the VCR and load a blank cassette.**
 - See your VCR instruction manual for details.
4. **Set the VCR's input selector to LINE, and put it in record pause mode.**
5. **Set the camera's OPERATE switch to PLAY, and load your recorded cassette.**

Basic editing

1. **Find a point on your recorded cassette slightly ahead of the section you want to copy.**
2. **Start to play it back while you monitor the picture on the TV.**
3. **Start recording on the VCR as soon as the section you want to copy appears on the screen.**
4. **Pause the VCR at the end of the section you want to copy, then stop playback on the camera.**
5. **Repeat steps 1 to 4 until your edited recording is complete.**

REMOTE terminal



(LANC) stands for Local Application Control Bus System. The REMOTE terminal allows you to connect the camera to equipment such as the VE-100 Video Editor (p. 32). Some buttons on other editing equipment may operate differently from those on the camera.

Note:

- The quality of the edited tape will be slightly lower than that of the original.

Making Better Videos

Holding the camera



For maximum stability, place your right hand through the grip belt and keep your right elbow pressed against your body. Rest your left hand lightly on the side of the camera. With practice, you will be able to operate the controls by touch, without taking your eye off the action.

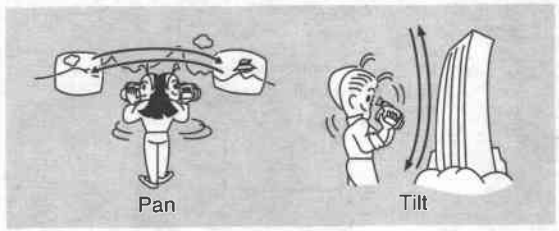


For low-angle shooting, hold the camera as shown and use your thumb to operate the START/STOP button.



To prevent any unwanted movement, you can mount the camera on a tripod, and operate it with the wireless controller

Camera moves



Use pans to record a landscape or follow a moving subject. Decide the area you want to cover and stand facing the end of your panning angle. Without moving your feet, turn your waist to the starting position. Start recording, and after a few seconds begin to turn slowly from the waist. Hold the final image for a few seconds before you stop recording.

Tilt the camera up to exaggerate the height of the subject. Tilt down from the top of a building, for example, as an introduction to subjects at the bottom.

Remember that any camera movement or change in picture angle should have a definite purpose. Avoid unnecessary or half-hearted movements.

Lighting and white balance

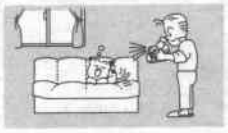
The camera's auto white balance system compensates for the changes in colour which are caused by different light sources. Although slight variations are unavoidable, colours will appear natural in virtually every situation:

indicates auto white balance range.

Bluish light ▲	Blue sky
	TV screen
White light	Cloudy sky
	Sunlight
	White fluorescent light
	Two hours after sunrise or before sunset
	One hour after sunrise or before sunset
	Electric halogen light
	Thirty minutes after sunrise or before sunset
	White electric light bulb
Reddish light ▼	Sunrise, sunset
	Candlelight



Try to record with light from a single source. Correct white balance cannot be obtained for two types of lighting at once.



Use the video light for bright, lifelike colours when shooting indoors.

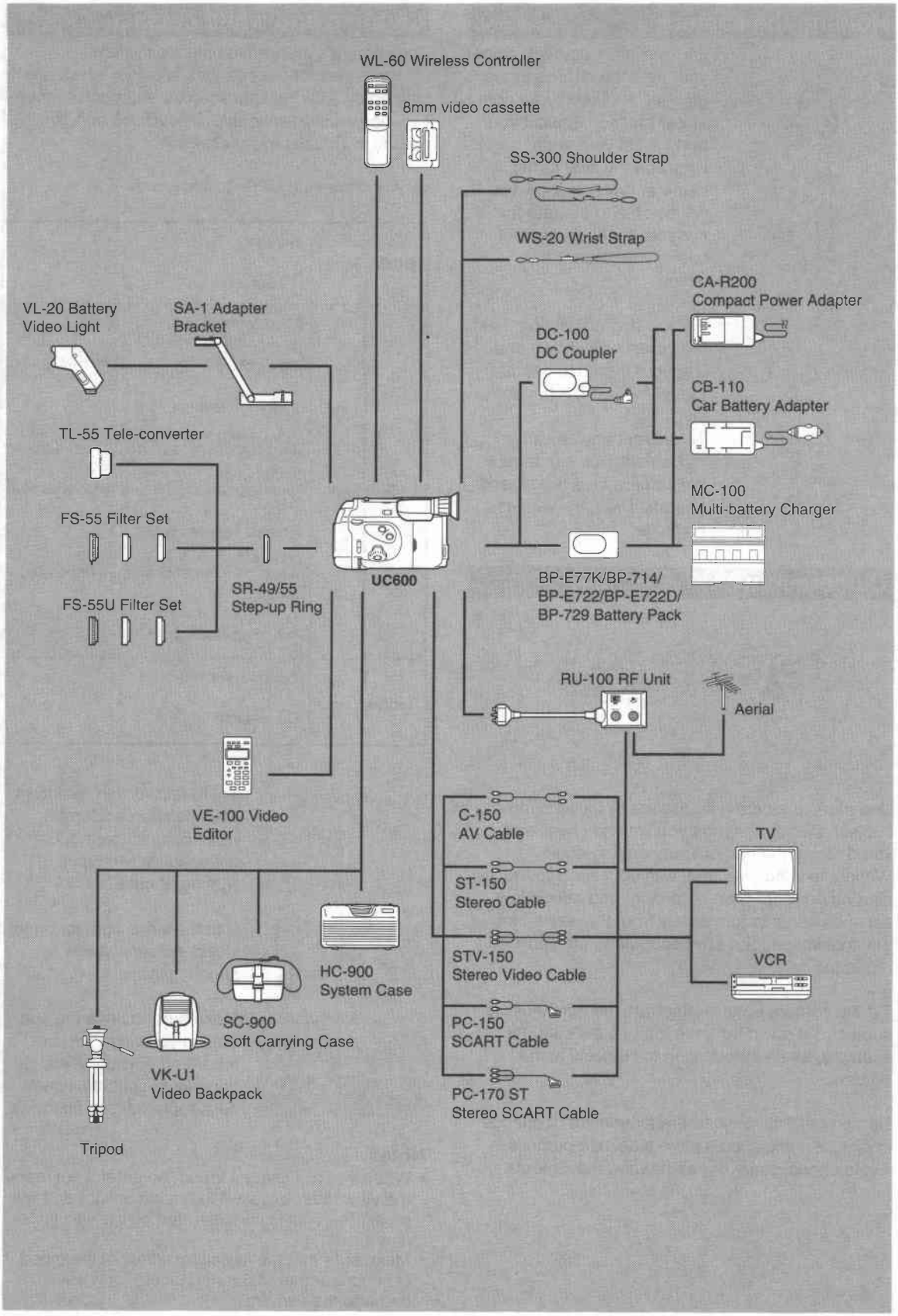


Make sure to have the sun behind you when you are recording outside. Avoid very bright light, as it can cause unattractive shadows.

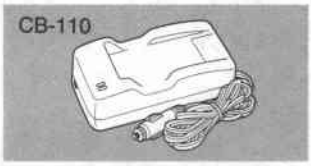
Notes:

- When you are using a tripod, be careful not leave the viewfinder exposed to bright sunlight or it will melt. (The light is concentrated by the viewfinder lens.)
- Make sure that the fastening screw of the tripod is no longer than 6.5 mm (¼ inch), or it will damage the camera.

UC600 Video System

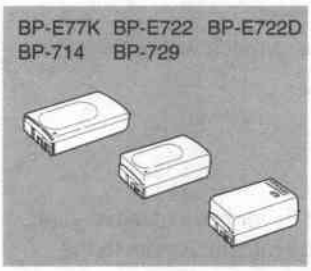


Optional Accessories



CB-110 Car Battery Adapter

Power your camera or recharge battery packs on the move. The car battery adapter plugs into your car's cigarette lighter socket and runs off a 12/24 V negative ground battery.

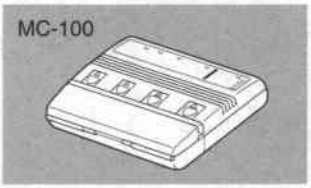


BP-714, BP-E722, BP-E722D, and BP-729 Battery Packs

As well as the BP-E77K supplied with your camera, a whole range of optional battery packs is available for longer recordings:

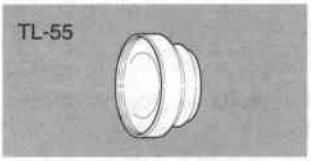
BP-714 55 min.
BP-E722/E722D 1 hr. 20 min.
BP-729 1 hr. 50 min.

The BP-E722D has a five-LED display which lets you know how much charge you have left.



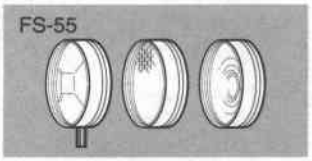
MC-100 Multi-battery Charger

The microcomputer-controlled MC-100 takes up to four battery packs and dramatically cuts recharge times (it can charge the BP-E77K in just 45 minutes).
It also performs an automatic charge/discharge/recharge cycle which refreshes battery packs, restoring them to full capacity.



TL-55 Tele-converter

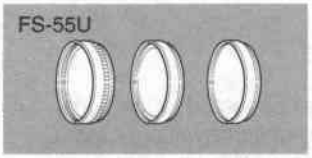
This tele-converter lens increases the focal length of the camera lens by a factor of 1.4. The zoom and autofocus operate as usual, so you can take full advantage of the extra range.



FS-55 Filter Set

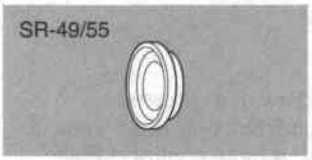
Three special effects filters to add a creative touch to your recordings: multiple-image, R-cross and zoom-spot.

• Focus manually when using special effects filters.



FS-55U Filter Set

Ultraviolet, neutral density and circular polarising filters to help you take control of difficult lighting conditions.



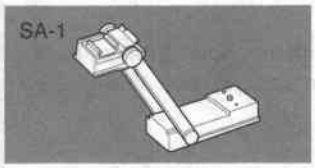
SR-49/55 Step-up Ring

Allows a filter or tele-converter to be attached to the lens of the UC600.



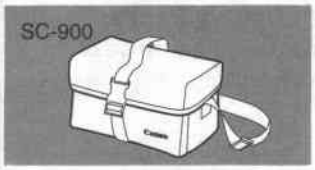
VL-20 Battery Video Light

This compact yet powerful video light can be used for both indoor and outdoor shooting. There are no cables — the BP-E77K Battery Pack fits neatly inside, powering it for up to 15 minutes. For longer recordings, the BP-E722/BP-E722D and BP-729 give about 35 and 50 minutes' use respectively.



SA-1 Adapter Bracket

Attaches the VL-20 Battery Video Light securely to the camera.



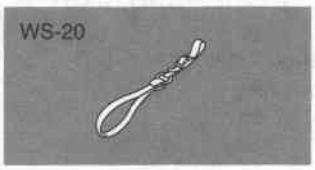
SC-900 Soft Carrying Case

This lightweight bag keeps the camera within easy reach without weighing you down or getting in the way.



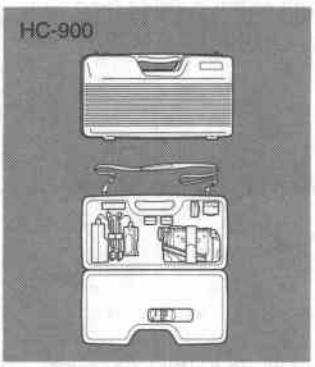
VK-U1 Video Backpack

With this rugged, go-anywhere backpack, you'll never have to leave your camera behind. It has a full-length zip to give you instant access to the camera and accessories.



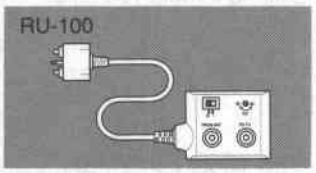
WS-20 Wrist Strap

Provides an extra measure of protection for active shooting.



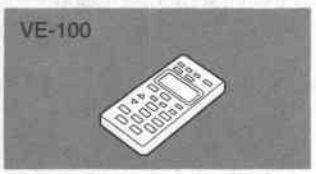
HC-900 System Case

This solid, lockable case provides safe and stylish protection for the camera and its accessories during transportation and storage.



RU-100 RF Unit

This optional converter allows the camera to be connected to the aerial terminal of any TV. It can be a useful accessory while travelling, as you may need it if you want to connect the camera to a TV in your hotel room.



VE-100 Video Editor

This easy-to-use editor controls the camera and a video recorder simultaneously for fast, accurate assembly editing. Not only does it link up to any (LANC) terminal, it can even learn the remote control signals used by most VCRs.

CANON GENUINE VIDEO ACCESSORY

THIS MARK IDENTIFIES GENUINE CANON VIDEO ACCESSORIES. WHEN YOU USE CANON VIDEO EQUIPMENT, WE RECOMMEND CANON-BRAND ACCESSORIES OR PRODUCTS BEARING THE SAME MARK.

Cautions and Maintenance

Cautions

Avoid high temperatures and high humidity.
- Do not leave the camera inside a car in hot weather, for example.
- Be careful of heat radiating from video lighting equipment.
- Do not take the camera into a humid room.

Avoid sudden changes in temperature.
- If you take the camera from a cold place to a warm place, condensation may form on the lens and internal parts (see p. 34).

Do not point the lens at strong light sources.
- Never point it at the sun, and do not leave it aimed at a bright subject.
- Be especially careful when leaving the camera on a tripod.

Avoid magnetic or electric fields.
- The picture and/or sound may be affected or the camera may malfunction when used in strong magnetic or electric fields.

Do not expose the camera to water.
- Cover the camera when you are recording in light rain or mist.
- There is a risk of electric shock if water gets inside the camera — contact qualified service personnel as soon as possible.

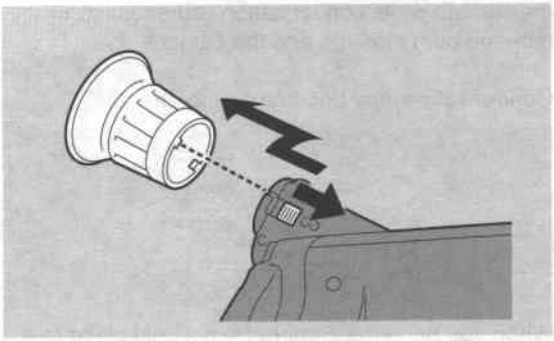
Always replace the lens cap.
- Sand and dust can damage the lens — be especially careful on windy days.

Handle the camera gently.
- Vibration or shock can cause damage.
- Do not use the viewfinder as a carrying handle.

Do not disassemble the camera.
- This is very dangerous as there is a risk of electric shock — if the camera does not function properly, take it to qualified service personnel.

Maintenance

Viewfinder



- Clean the viewfinder screen using a blower brush.
 First, remove the eyepiece. Press and hold the RELEASE switch, pull the eyepiece out, turn it anticlockwise, and slide it off.
 To reattach it, align the mark on the eyepiece with the line on its base, then push it on so that it clicks back into place.

Camera body and lens
- Use a soft, dry cloth to clean the camera body or lens. Never use chemically treated cloth or volatile solvents such as paint thinner.

Video heads
- Clean the video heads only when necessary, preferably using Canon's CC-8 Video Head Cleaning Cassette.
- Do not use a wet-type cleaning cassette as this can cause damage.

Storage

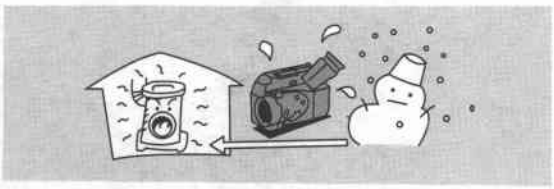
If you do not intend to use the camera for some time, store it in an area which is free of dust and moisture, and where the temperature is no higher than 30°C (86°F).
After storage, check each part and function of your camera to make sure everything is still working properly.

Note:
- These cautions also apply to cassettes.

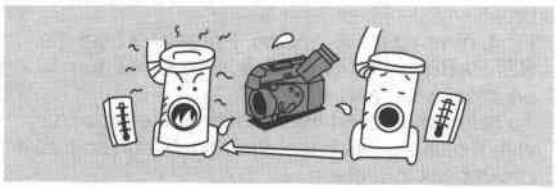
Condensation

Condensation may form on the camera when it is moved from a cold place to a warm place. Using the camera while condensation is present can damage both the tape and the camera.

Condensation may become a problem:



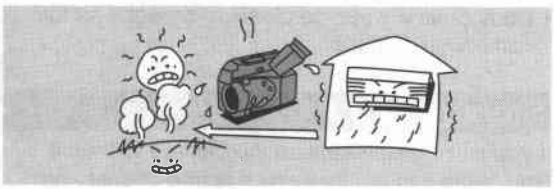
When you bring the camera from a cold place to a warm room



When a cold room is heated rapidly



When the camera is left in a humid room



When the camera is taken from an air-conditioned room to a warm, humid place

Protecting the camera from condensation

- Before you bring the camera to a warm or humid place where condensation is likely to be a problem, unload the cassette and put the camera in a plastic bag. Wait until the camera reaches room temperature before you take it out of the bag.

What happens when condensation is detected

- The operation indicator flashes and the mark flashes in the viewfinder. If there is a cassette in the camera, it stops automatically and "EJECT" flashes in the viewfinder.
- The camera may not detect the condensation immediately — the condensation warning may not start flashing for 10 to 15 minutes.
- You cannot load a cassette when condensation is detected.

What you should do

- Remove the cassette, leave the cassette compartment open, and turn the camera off.
- Leave it in a dry place until the condensation evaporates. After the condensation warning stops flashing, wait at least another hour before trying to use the camera.

Using the camera abroad

Power sources

- You can use the compact power adapter to operate your camera and charge battery packs in any country where the electricity supply is between 100 and 240 V AC, 50–60 Hz.

TV playback

- Although you can always play back your recordings in the viewfinder, your camera can only be connected to TVs which use its PAL system. This TV system is used in the following countries:
 Algeria, Australia, Austria, Bangladesh, Belgium, Brunei, China, Denmark, Finland, Germany, Hong Kong, Iceland, India, Indonesia, Ireland, Italy, Jordan, Kenya, Kuwait, Liberia, Malaysia, Malta, Mozambique, the Netherlands, New Zealand, North Korea, Norway, Oman, Pakistan, Portugal, Qatar, Sierra Leone, Singapore, South Africa, Spain, Sri Lanka, Swaziland, Sweden, Switzerland, Tanzania, Thailand, Turkey, Uganda, United Arab Emirates, United Kingdom, Yemen, former Yugoslavia, Zambia.

Troubleshooting

Refer to this checklist first if you have any problems with your camera. Possible explanations are given below each problem on the list — turn to the page numbers in brackets for more information. Make sure that the camera is properly connected if you are using it with a TV or VCR.
Consult your dealer or service outlet if problems persist.

? The camera won't turn on.
- The battery pack is exhausted (p. 9).

? The camera doesn't work.
- You haven't turned it on (p. 6, 13).
- You haven't loaded a cassette (p. 11).
- The battery pack is exhausted, or not properly attached (p. 8, 9).

? The camera turned itself off.
- You left it in record pause mode for more than about five minutes (p. 6).
- The battery pack is exhausted (p. 9).

? The start/stop button doesn't work.
- The OPERATE switch isn't set to CAMERA (p. 6).
- The STANDBY/LOCK switch is set to LOCK (p. 6).
- You haven't loaded a cassette, or it is set for erasure prevention (p. 11).
- The tape has reached the end (END appears in the viewfinder).

? The PLAY ▶ button doesn't work.
- The OPERATE switch isn't set to PLAY(p. 13).
- You haven't loaded a cassette (p. 11).
- The tape has reached the end (END appears in the viewfinder).

? The video light won't turn on.
- The battery pack is exhausted (p. 9).
- The OPERATE switch isn't set to CAMERA (p. 6).
- The bulb is broken (p. 25).
- You haven't loaded a cassette (p. 11).

? The camera won't focus.
- The subject isn't suitable for autofocus (p. 26).
- The viewfinder lens needs adjusting (p. 12).
- The lens is dirty (p. 33).

? There's no picture in the viewfinder.
- You haven't taken off the lens cap (p. 12).
- The OPERATE switch isn't set to CAMERA (p. 6).

? There's a bright stripe on the screen.

- When you are recording in dark places, a bright light in the scene may cause a vertical bar, called smear, to appear on the screen.

? The playback picture is rough.

- If your recordings do not play back smoothly, clean the video heads (p. 33).

? There's no picture on the TV screen, even though the tape is moving.
- The video heads need cleaning (p. 33).
- The TV/VIDEO selector on the TV isn't set to VIDEO (p. 14).
- If the camera is connected using the RF unit, you haven't selected the video channel (p. 15, 16).

? The wireless controller doesn't work.
- The remote sensor is turned off. "T/S OFF" appears in the viewfinder (p. 19).
- The batteries are exhausted (p. 19).

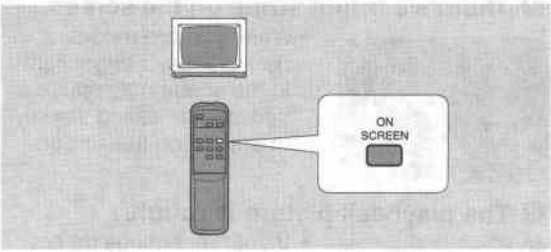
? The tally lamp doesn't flash.
- It is turned off. "T/S OFF" appears in the viewfinder (p. 19).

? The operation indicator is flashing.
- Check the viewfinder displays (p. 36).

? There are air bubbles inside the lens.
- This is unlikely, but may happen if you use the camera in places where the air pressure is very low, in an aeroplane for example. The bubbles will disappear a week or so after you return the camera to normal atmospheric pressure.

? Malfunction
- External interference may cause the camera's microprocessor to malfunction temporarily. If random letters appear in the viewfinder or if normal operation is interrupted, remove and then replace the power source (and if necessary, the lithium battery).

Viewfinder Displays



To display the date and time on a connected TV, press the DATE button. Press the TITLE button to see the title. These displays are recorded just as they appear on the screen.

Press the wireless controller's ON SCREEN button to see the other viewfinder displays on the TV screen. They will not be added to any recordings you make with the camera.

indicates a flashing display.

2:35 PM
18.OCT.1994 — Date and time (p. 20)

BON VOYAGE — Title (p. 21)

PAUSE — Record pause mode (p. 6) or still playback (p. 13)

REC — Recording (p. 6)

▶ — Playback (p. 13)

▶▶ — Fast forward (p. 13)

▶▶ — Fast forward playback (p. 13)

◀◀ — Rewind (p. 13)

◀◀ — Rewind playback (p. 13)

STOP — Playback is stopped (p. 13).

EJECT — The camera is ejecting the tape (p. 11).

EJECT — The safety mechanism is activated. Unload the cassette and turn the camera off. Turn it on again and reload the cassette.

SP — Tape speed (p. 6)

No cassette is loaded, or the cassette is set for erasure prevention (p. 11).

END — The tape has reached the end.

T.RTN ◀◀ — Tape return (p. 13)

The battery pack is nearly exhausted (p. 8, 9).

The lithium battery is nearly exhausted, or not inserted properly (p. 10).

Condensation warning (p. 34)

W — T — Zoom display (p. 17)

1000 — Fast shutter speed (1/1000th of a second in this example) (p. 24)

AF — Manual focus (p. 26)

The image stabilizer is turned on (p. 18).

SPORTS — Program AE (p. 23)

PORTRAIT

SPOTLIGHT

SAND&SNOW

BLC — Backlight compensation (p. 23)

T/S — The tally lamp and remote sensor are turned off (p. 19).

1:23:45 — **Tape counter**

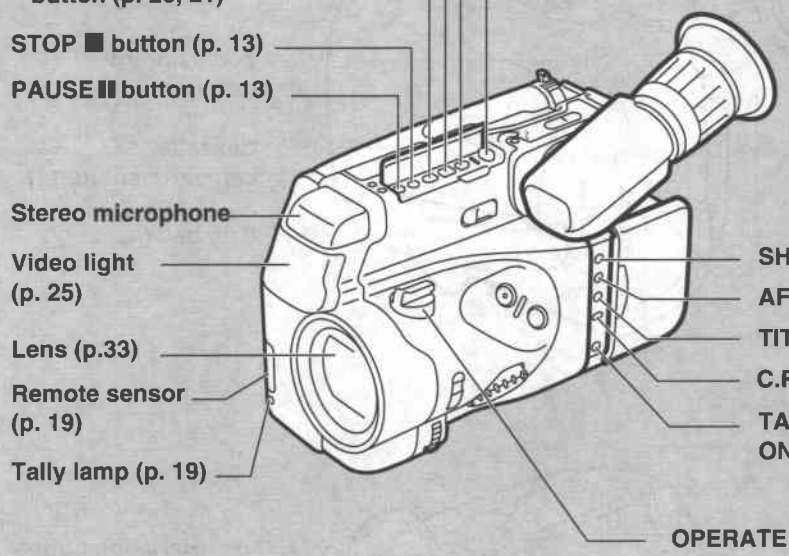
The tape counter indicates the approximate running time of the tape — 1 hour, 23 minutes and 45 seconds (in SP mode) in this example. When recording in LP mode, actual recording length is approximately twice the tape counter time. The tape counter is reset when a cassette is loaded, or when you press the COUNTER RESET button (p. 13).

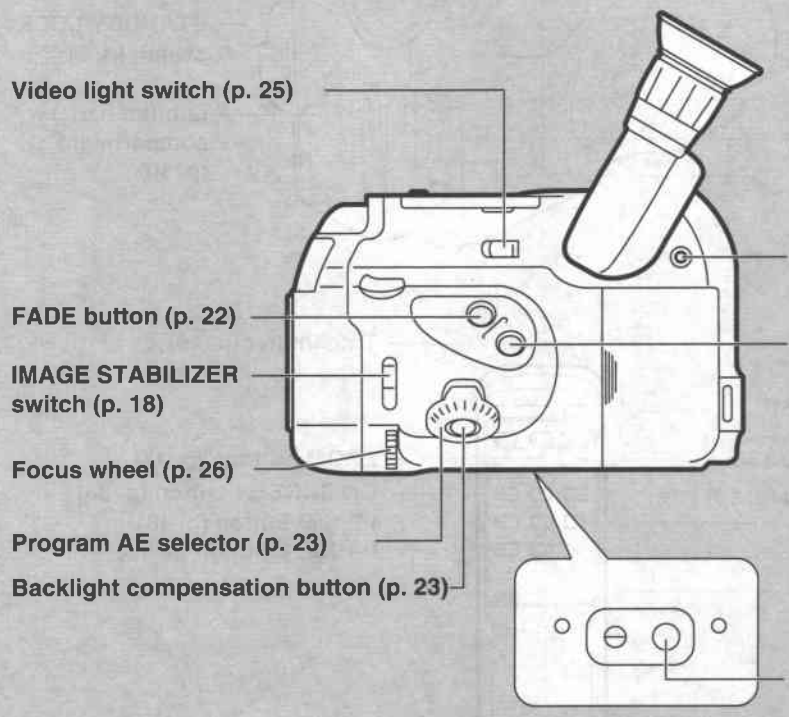
Recording reminder

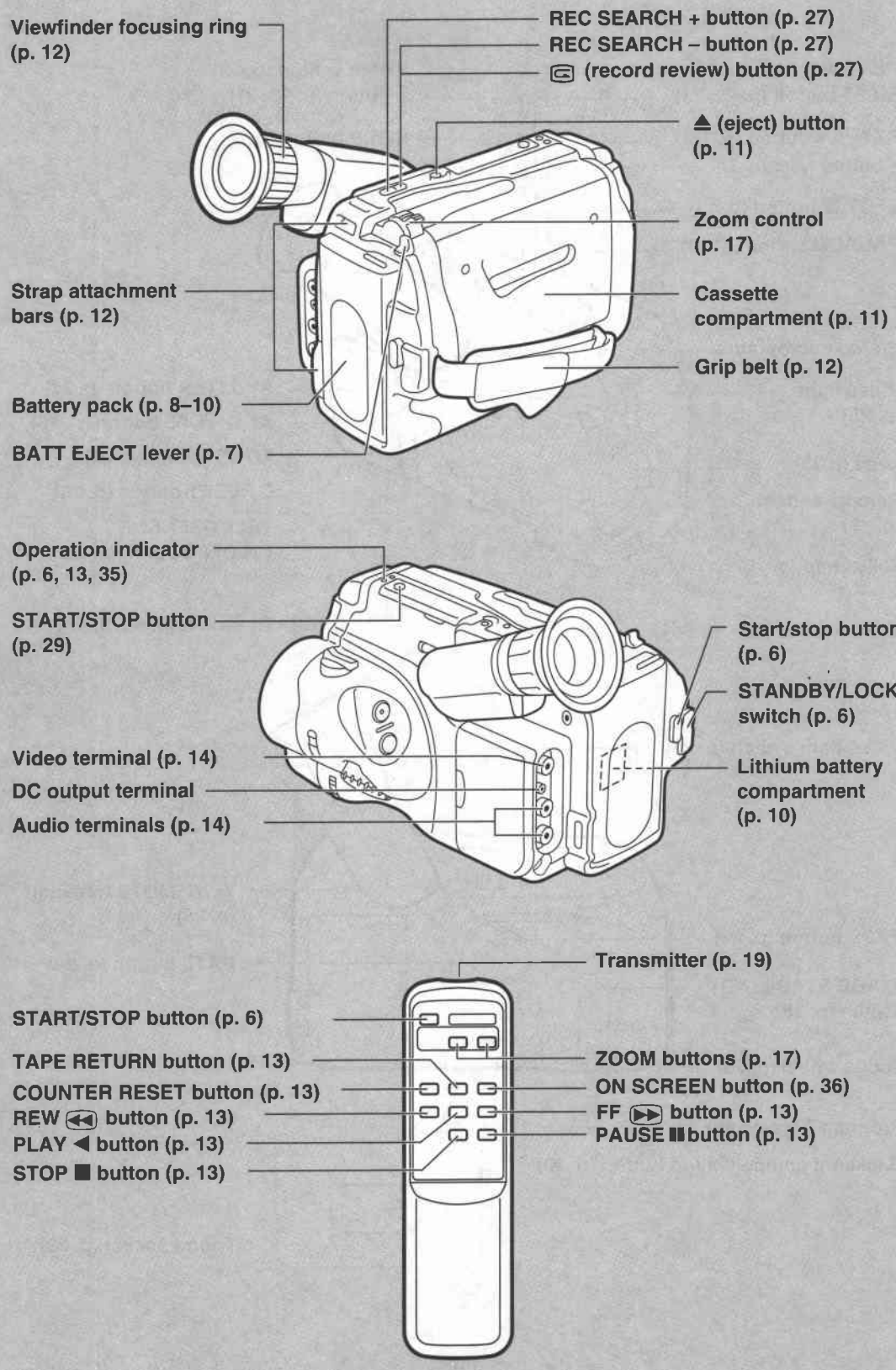
0SEC ➡ 10SEC

When you start recording, the camera counts from 0SEC to 10SEC. Shots which are shorter than 10 seconds may be difficult to edit later. On the other hand, if you are not planning to edit the recording, remember that a shot which does not contain action should generally last no longer than 10 seconds.

Nomenclature






Viewfinder focusing ring (p. 12)
REC SEARCH + button (p. 27)
REC SEARCH – button (p. 27)
(record review) button (p. 27)
▲ (eject) button (p. 11)
Zoom control (p. 17)
Strap attachment bars (p. 12)
Cassette compartment (p. 11)
Grip belt (p. 12)
Battery pack (p. 8–10)
BATT EJECT lever (p. 7)
Operation indicator (p. 6, 13, 35)
START/STOP button (p. 29)
Start/stop button (p. 6)
STANDBY/LOCK switch (p. 6)
Video terminal (p. 14)
DC output terminal
Audio terminals (p. 14)
Lithium battery compartment (p. 10)
Transmitter (p. 19)
START/STOP button (p. 6)
TAPE RETURN button (p. 13)
COUNTER RESET button (p. 13)
REW button (p. 13)
PLAY ◀ button (p. 13)
STOP ■ button (p. 13)
ZOOM buttons (p. 17)
ON SCREEN button (p. 36)
FF button (p. 13)
PAUSE ▮▮ button (p. 13)

Specifications

UC600

Power supply (rated):	6 V DC
Power consumption:	7.6 W (autofocus recording)
Television system:	CCIR standard (625 lines, 50 fields) PAL colour signal
Video recording system:	2 rotary heads, helical scanning system Luminance signal: FM azimuth recording Chrominance signal: Converted subcarrier phase shift recording (8mm video standard)
Audio recording system:	Frequency multiplexing with the video signal by 2 rotary heads (2 channels)
Image sensor:	⅓-inch CCD (charge-coupled device), 320,000 pixels (300,000 effective pixels)
Tape format:	8mm video cassette, metal particle
Tape speed:	SP: 20.05 mm/s LP: 10.03 mm/s
Maximum recording time:	3 hours (with a P5-90 cassette, in LP mode)
Fast forward/rewind time:	Approx. 6 minutes (with a P5-90 cassette)
Lens:	f/1.8–2.8, 12X power zoom, 5.2–62.4 mm
Focusing system:	TTL autofocus, manual focusing possible
Minimum focusing distance:	Wide-angle end: 1 cm (⅜ in) Telephoto end: 80 cm (2 ft 8 in) Intermediate zoom position: 1 m (3 ft 4 in)
Minimum illumination:	2 lux
Recommended illumination:	More than 100 lux
Filter diameter:	55 mm (using the optional SR-49/55 Step-up Ring)
Electronic viewfinder:	½-inch monochrome CRT
Microphone:	Stereo electret condenser microphone
Output level:	Video terminal: 1 Vp-p/75 ohms, unbalanced Audio terminals: –10 dBV, less than 3 kohms, unbalanced
Operating temperature range:	0°–40°C (32°–104°F)
Dimensions:	118 X 117 X 199 mm (4⅝ X 4⅝ X 7 13/16 in)
Weight:	900 g (1 lb 15½ oz)

Video light

Central light intensity:	Approx. 120 cd
Illumination angle:	Approx. 30°
Central luminosity:	Approx. 40 lux at 2 m (6 ft 6 in)
Colour temperature:	Approx. 3,200 K
Power consumption:	4 W (6 V)
Required bulb:	Canon Halogen Bulb 5.7V 4W
Bulb life:	Approx. 30 hours
Power supply:	Battery pack or DC coupler mounted on the camera

Weight and dimensions are approximate
Errors and omissions excepted.
Subject to change without notice.

Index

A
Abroad, Using the Camera, 34
Accessories, 3, 31
Adapter, Mains, 7
Audio/Video Terminals, 14
Autofocus, 26

B
Backlight Compensation, 23
Basic Recording, 6
Battery Pack, 8–10

C
Cables, 3, 14–16
Cassettes, 11
Cautions and Maintenance, 33
Charging the Battery Pack, 8–9
Cleaning the Camera, 33
Compact Power Adapter, 7, 10
Condensation, 34
Connection to TV or VCR, 14

D
Date and Time Display, 20
DC Coupler, 7
Discharging the Battery Pack, 10

E
Editing, 28
ERASE ON/OFF switch, 11
Erasure Prevention, 11
Exposure Control, 23

F
Fade, 22
Fast Forward/Fast Forward Playback, 13
Feedback, 14
Focusing, 26

G
Grip Belt, 12

H
Head Cleaning, 33
High-Speed Search, 13
High-Speed Shutter, 24

I
Image Stabilizer, 18
Introducing the UC600, 4

L
LANC, 28
Lens Cap, 12
Light, 25
Lithium Battery, 10
Loading Cassettes, 11
LP Mode, 6

M
Maintenance, 33
Making Better Videos, 29
Manual Focus, 26

N
Nomenclature, 37

O
Optical Image Stabilizer, 18
Optional Accessories, 31

P
Pause, Record, 6
Playback, 13
Playback Connection, 14
Portrait, 23
Power Sources, 7
Preparing the Camera, 12
Problems, 35
Program AE, 23

R
REC/SAVE Switch, 11
Recharging the Battery Pack, 8–9
Recording, 6
Record Pause Mode, 6
Record Review, 27
Record Search, 27
Refreshing the Battery Pack, 10
Remote Sensor, 19
Rewind/Rewind Playback, 13

S
Sand & Snow, 23
SCART, 15
Shoulder Strap, 12
Shutter Speeds, 24
Specifications, 39
SP Mode, 6
Sports, 23
Spotlight, 23
Still Playback, 13
Storage, 33

T
Tally Lamp, 19
Tape Counter, 13, 36
Tape Return, 13
Tape Speed, 6
Telephoto, 17
Temperature, 9, 33
Time Display, 20
Titles, 21
Tripod, 29
Troubleshooting, 35
TV, 14

U
UC600 Video System, 30
Using the Camera Abroad, 34

V
VCR, 28
Video Cassettes, 11
Video Channel, 15–16
Video Light, 25
Viewfinder, 12, 33
Viewfinder Displays, 36

W
Wide-angle, 15
Wireless Controller, 19
White Balance, 29

Z
Zooming, 17

Canon

CANON INC. 30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo 146, Japan

Canon Europa N.V.
P.O. Box 2262, 1180 EG Amstelveen, the Netherlands

Canon UK Ltd
Camera Division, Units 4 & 5, Brent Trading Centre, North Circular Road, Neasden, London NW10 0JF, United Kingdom
Telephone 081-459-1266

Canon Australia Pty. Ltd
1 Thomas Holt Drive, North Ryde, N.S.W. 2113, Australia
Telephone 805-2000, Fax 887-4484

Canon New Zealand Ltd
Fred Thomas Drive, Takapuna, P.O. Box 33-336, Auckland, New Zealand
Telephone 486-1570, Fax 486-6420

Canon Singapore Pte. Ltd
79 Anson Road #09-01/06, Singapore 0207
Telephone (65)-532-4400, Fax (65)-221-2939

Canon Hongkong Trading Co., Ltd
10/F, Mirror Tower, 61 Mody Road, Tsimshatsui East, Kowloon, Hong Kong

Canon Latin America, Inc.
Sales & Enquiries: P.O. Box 7022, Panama 5, Republic of Panama
Service Department: P.O. Box 2019, Colon Free Zone, Republic of Panama

Printed on 70% reused paper.

PUB.DIEN-108
0894SZ3.6

© CANON INC. 1994
DY8-9020-058-000

PRINTED IN JAPAN
IMPRIME AU JAPON